SHARP SERVICE MANUAL

No. S37X3LC46E77U

LCD COLOR TELEVISION

LC-46E77U

MODELS LC-52E77U

In the interests of user safety (required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

CONTENTS

SAFETY PRECAUTION
IMPORTANT SERVICE SAFETY PRECAUTION i
PRECAUTIONS A PRENDRE LORS DE LA REPARATION ii
PRECAUTIONS FOR USING LEAD-FREE SOLDER iii

CHAPTER 1. SPECIFICATIONS
[1] SPECIFICATIONS 1-1

CHAPTER 2. OPERATION MANUAL
[1] OPERATION MANUAL 2-1

CHAPTER 3. DIMENSIONS
[1] DIMENSIONS 3-1

CHAPTER 4. REMOVING OF MAJOR PARTS
[1] REMOVING OF MAJOR PARTS (LC-46E77U) 4-1
[2] REMOVING OF MAJOR PARTS (LC-52E77U) 4-7

CHAPTER 5. ADJUSTMENT
[1] ADJUSTMENT PROCEDURE 5-1
[2] PUBLIC MODE SETTING PROCEDURE 5-16

CHAPTER 6. TROUBLESHOOTING TABLE
[1] TROUBLESHOOTING TABLE 6-1

CHAPTER 7. OVERALL WIRING/SYSTEM BLOCK DIAGRAM
[1] OVERALL WIRING DIAGRAM 7-1
[2] SYSTEM BLOCK DIAGRAM 7-2

CHAPTER 8. PRINTED WIRING BOARD ASSEMBLIES
[1] KEY Unit 8-1
[2] MAIN Unit 8-2
[3] LED Unit 8-6

CHAPTER 9. SCHEMATIC DIAGRAM
[1] DESCRIPTION OF SCHEMATIC DIAGRAM 9-1
[2] SCHEMATIC DIAGRAM 9-2

Parts Guide

Parts marked with " ⚠ " are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

SAFETY PRECAUTION

IMPORTANT SERVICE SAFETY PRECAUTION

■ **Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:**

■WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.

CAUTION: FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE REPLACE ONLY WITH SAME TYPE FUSE.

F7000 (250V 6.3A)

■BEFORE RETURNING THE RECEIVER (Fire & Shock Hazard)

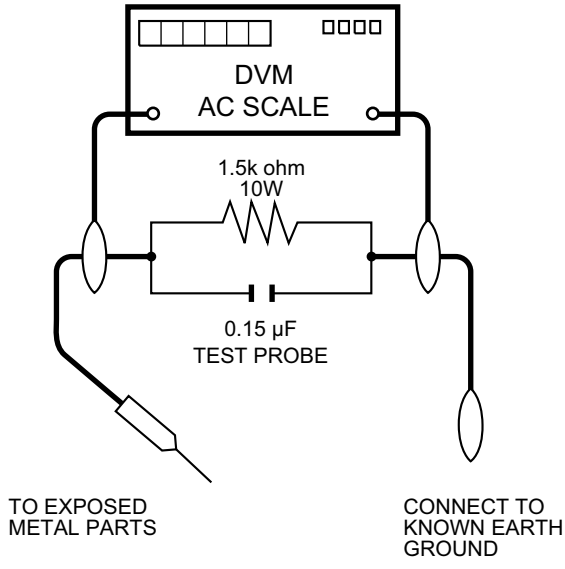
Before returning the receiver to the user, perform the following safety checks:

3. Inspect all lead dress to make certain that leads are not pinched, and check that hardware is not lodged between the chassis and other metal parts in the receiver.
4. Inspect all protective devices such as non-metallic control knobs, insulation materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
5. To be sure that no shock hazard exists, check for leakage current in the following manner.

- Plug the AC cord directly into a 120 volt AC outlet.
- Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15μF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to an earth ground.
- Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity or measure the AC voltage drop across the resistor.
- Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.

  All checks must be repeated with the AC cord plug connection reversed. (If necessary, a nonpolarized adaptor plug must be used only for the purpose of completing these checks.)

  Any reading of 0.75 Vrms (this corresponds to 0.5 mA rms AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the monitor to the owner.



SAFETY NOTICE

Many electrical and mechanical parts in LCD color television have special safety-related characteristics.

These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.

Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠" and shaded areas in the Replacement Parts List and Schematic Diagrams.

For continued protection, replacement parts must be identical to those used in the original circuit.

The use of a substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire or other hazards.

PRECAUTIONS A PRENDRE LORS DE LA REPARATION

■ **Ne peut effectuer la réparation qu' un technicien spécialisé qui s'est parfaitement accoutumé à toute vérification de sécurité et aux conseils suivants.**

■ AVERTISSEMENT

1. N'entreprendre aucune modification de tout circuit. C'est dangereux.
2. Débrancher le récepteur avant toute réparation.

PRECAUTION: POUR LA PROTECTION CONTINUE CONTRE LES RISQUES D'INCENDIE, REMPLACER LE FUSIBLE

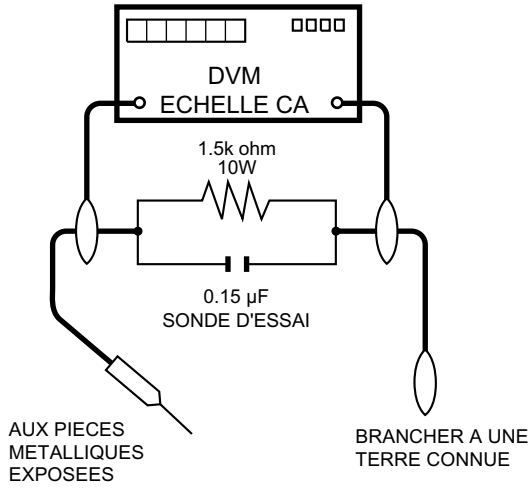
F7000 (250V 6.3A)

■ VERIFICATIONS CONTRE L'INCEN-DIE ET LE CHOC ELECTRIQUE

Avant de rendre le récepteur à l'utilisateur, effectuer les vérifications suivantes.

3. Inspecter tous les faisceaux de câbles pour s'assurer que les fils ne soient pas pincés ou qu'un outil ne soit pas placé entre le châssis et les autres pièces métalliques du récepteur.
4. Inspecter tous les dispositifs de protection comme les boutons de commande non-métalliques, les isolants, le dos du coffret, les couvercles ou blindages de réglage et de compartiment, les réseaux de résistancecapacité, les isolateurs mécaniques, etc.
5. S'assurer qu'il n'y ait pas de danger d'électrocution en vérifiant la fuite de courant, de la facon suivante:

- Brancher le cordon d'alimentation directem-ent à une prise de courant de 120V. (Ne pas utiliser de transformateur d'isolation pour cet essai).
- A l'aide de deux fils à pinces, brancher une résistance de 1.5 kΩ 10 watts en parallèle avec un condensateur de 0.15μF en série avec toutes les pièces métalliques exposées du coffret et une terre connue comme une conduite électrique ou une prise de terre branchée à la terre.
- Utiliser un voltmètre CA d'une sensibilité d'au moins 5000Ω/V pour mesurer la chute de tension en travers de la résistance.
- Toucher avec la sonde d'essai les pièces métalliques exposées qui présentent une voie de retour au châssis (antenne, coffret métallique, tête des vis, arbres de commande et des boutons, écusson, etc.) et mesurer la chute de tension CA en-travers de la résistance. Toutes les vérifications doivent être refaites après avoir inversé la fiche du cordon d'alimentation. (Si nécessaire, une prise d'adpatation non polarisée peut être utilisée dans le but de terminer ces vérifications.)
  La tension de pointe mesurèe ne doit pas dépasser 0.75V (correspondante au courant CA de pointe de 0.5mA).
  Dans le cas contraire, il y a une possibilité de choc électrique qui doit être supprimée avant de rendre le récepteur au client.



AVIS POUR LA SECURITE

De nombreuses pièces, électriques et mécaniques, dans les téléviseur ACL présentent des caractéristiques spéciales relatives à la sécurité, qui ne sont souvent pas évidentes à vue. Le degré de protection ne peut pas être nécessairement augmentée en utilisant des pièces de remplacement étalonnées pour haute tension, puissance, etc.
Les pièces de remplacement qui présentent ces caractéristiques sont identifiées dans ce manuel; les pièces électriques qui présentent ces particularités sont identifiées par la marque "⚠" et hachurées dans la liste des pièces de remplacement et les diagrammes schématiques.

Pour assurer la protection, ces pièces doivent être identiques à celles utilisées dans le circuit d'origine. L'utilisation de pièces qui n'ont pas les mêmes caractéristiques que les pièces recommandées par l'usine, indiquées dans ce manuel, peut provoquer des électrocutions, incendies, radiations X ou autres accidents.

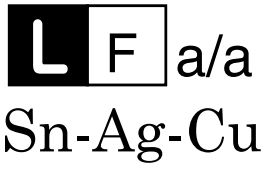
PRECAUTIONS FOR USING LEAD-FREE SOLDER

■Employing lead-free solder

- “PWBs” of this model employs lead-free solder. The LF symbol indicates lead-free solder, and is attached on the PWBs and service manuals. The alphabetical character following LF shows the type of lead-free solder.

  Example:

Indicates lead-free solder of tin, silver and copper.



Indicates lead-free solder of tin, silver and copper.

■Using lead-free wire solder

- When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.

  As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40 °C, we recommend you to use a dedicated soldering bit, if you are not familiar with how to obtain lead-free wire solder or soldering bit, contact our service station or service branch in your area.

■Soldering

- As the melting point of lead-free solder (Sn-Ag-Cu) is about 220 °C which is higher than the conventional lead solder by 40 °C, and as it has poor solder wettability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, Since the land may be peeled off or the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.

  Lead-free solder contains more tin, and the end of the soldering bit may be easily corroded. Make sure to turn on and off the power of the bit as required.

  If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.

  When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

- Be careful when replacing parts with polarity indication on the PWB silk.

Lead-free wire solder for servicing

PARTS CODE	PRICE RANK	PART DELIVERY	DESCRIPTION
ZHNDAi123250E	BL	J	ϕ0.3mm 250g (1roll)
ZHNDAi126500E	BK	J	ϕ0.6mm 500g (1roll)
ZHNDAi12801KE	BM	J	ϕ1.0mm 1kg (1roll)

CHAPTER 1. SPECIFICATIONS

[1] SPECIFICATIONS

Item			Model: LC-46E77U	Model: LC-52E77U
LCD panel			46" Class (45 63/64" Diagonal) Advanced Super View & BLACK TFT LCD	52" Class (52 1/32" Diagonal) Advanced Super View & BLACK TFT LCD
Resolution			2,073,600 pixels (1,920 x 1,080)	
TV Function	TV-standard (CCIR)		American TV Standard ATSC/NTSC System	
	Receiving Channel	VHF/UHF	VHF 2-13ch, UHF 14-69ch	
		CATV	1-135ch (non-scrambled channel only)	
		Digital Terrestrial Broadcast (8VSB)	2-69ch	
		Digital cable*1 (64/256 QAM)	1-135ch (non-scrambled channel only)	
	Audio multiplex		BTSC System	
Audio out			10W x 2	
Terminals	Rear	INPUT 1	AV in, COMPONENT in	
		INPUT 2	COMPONENT in, S-VIDEO in	
		INPUT 4	ANALOG RGB (PC) in (15-pin mini D-sub female connector), Audio in (Ø 3.5 mm jack)	
		INPUT 6	HDMI in with HDCP, Audio in (Ø 3.5 mm jack)	
		INPUT 7	HDMI in with HDCP	
		INPUT 8	HDMI in with HDCP	
		INPUT 9	HDMI in with HDCP	
		ANT/CABLE	75 Ω Unbalance, F Type x 1 for Analog (VHF/UHF/CATV) and Digital (AIR/CABLE)	
		AUDIO	Audio in (Ø 3.5 mm jack)	
		DIGITAL AUDIO OUTPUT	Optical Digital audio output x 1 (PCM/Dolby Digital)	
		OUTPUT	Audio out	
		RS-232C	9-pin D-sub male connector	
	Side	INPUT 3	AV in	
		INPUT 5	HDMI in with HDCP	
		SERVICE	Software update	
OSD language			English/French/Spanish	
Power Requirement			AC 120 V, 60 Hz	
Power Consumption			254 W (0.5 W Standby with AC 120 V)	290 W (0.5 W Standby with AC 120 V)
Weight		TV + stand	48.5 lbs./22.0 kg	61.7 lbs./28.0 kg
		TV only	41.9 lbs./19.0 kg	52.9 lbs./24.0 kg
Dimension*2 (W x H x D)		TV + stand	43 53/64 x 30 31/64 x 12 13/16 inch	49 3/8 x 34 9/64 x 14 17/32 inch
		TV only	43 53/64 x 28 5/32 x 3 61/64 inch	49 3/8 x 32 9/64 x 5 1/4 inch
Operating temperature			+32°F to +104°F (0°C to e40°C)	

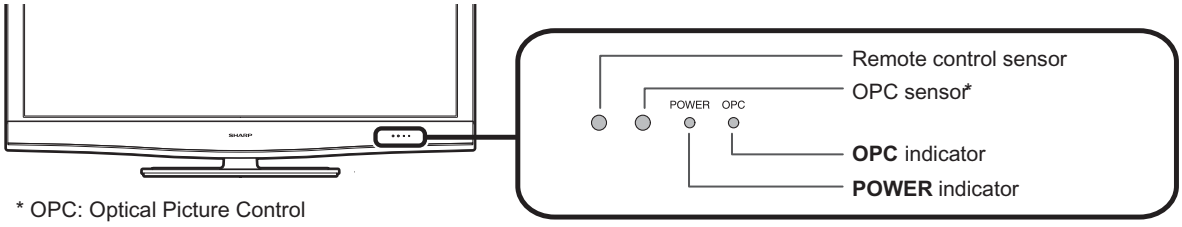
*1 Emergency alert messages via Cable are unreceivable.
*2 The dimensional drawings are shown on the inside back cover.
- As part of policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

CHAPTER 2. OPERATION MANUAL

[1] OPERATION MANUAL

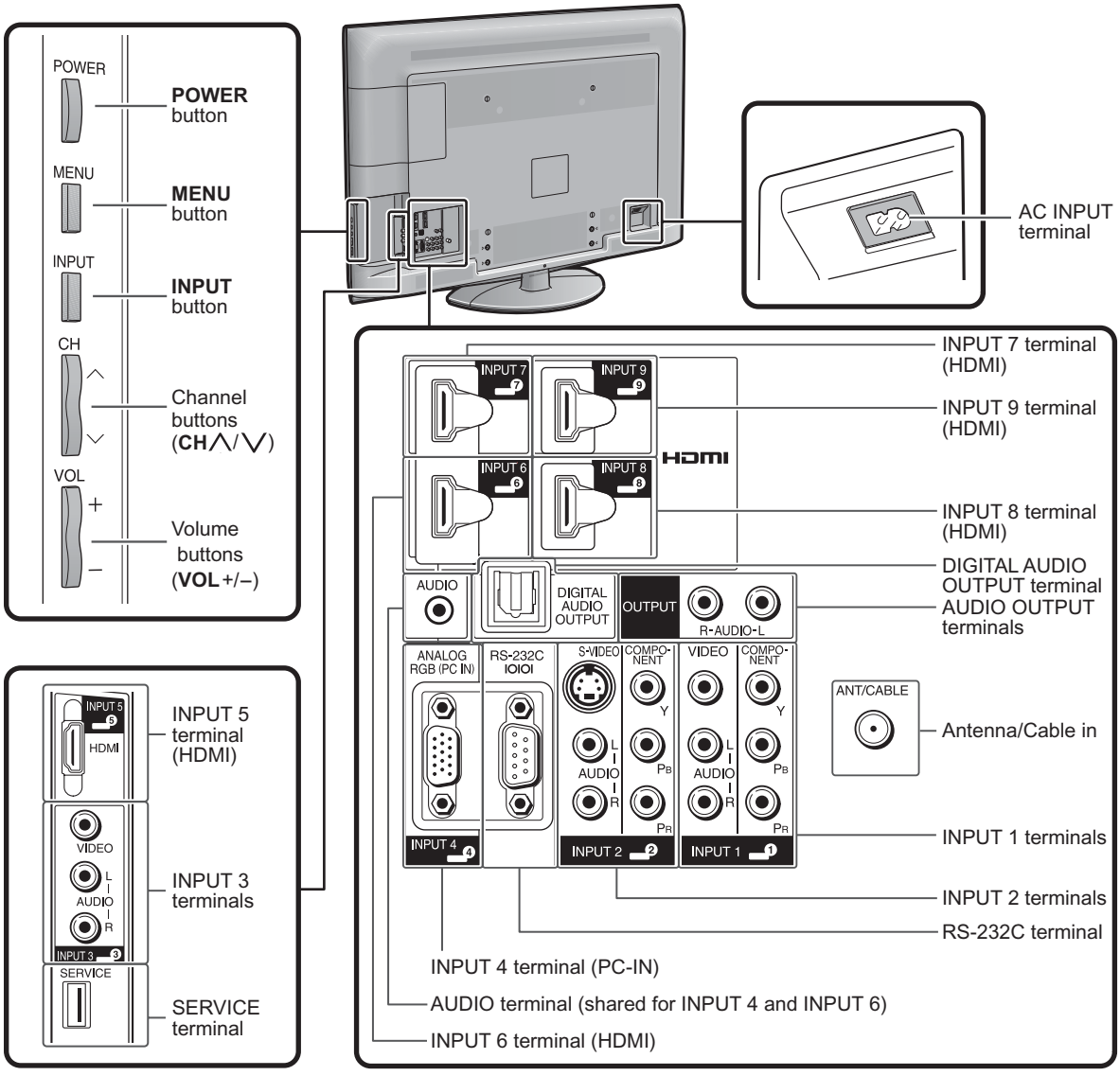
Part Names

TV (Front)



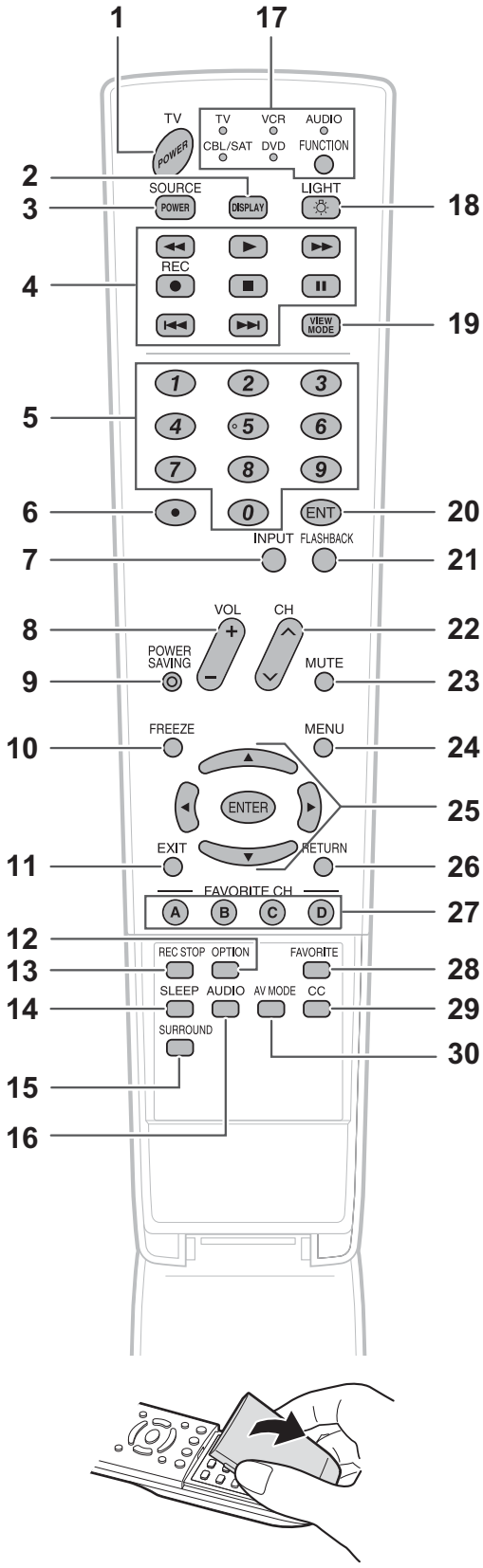
* OPC: Optical Picture Control

TV (Rear/Side)



Part Names

Remote Control Unit



1 **TV POWER:** Switch the TV power on or enter standby.

2 **DISPLAY:** Display the channel information.

3 **SOURCE POWER:** Turns the power of the external equipment on and off.

4 **External equipment operational buttons:** Operate the external equipment.

5 **0–9:** Set the channel.

6 **• (DOT):** Press a button that corresponds to the channel that you wish to watch.

7 **INPUT:** Select a TV input source. (TV, INPUT 1, INPUT 2, INPUT 3, INPUT 4, INPUT 5, INPUT 6, INPUT 7, INPUT 8, INPUT 9)

8 **VOL+** / **–** : Set the volume.

9 **POWER SAVING:** Select Power Saving settings.

10 **FREEZE:** Set the still image. Press again to return to normal screen.

11 **EXIT:** Turn off the menu screen.

12 **OPTION:** Display the AQUOS LINK MENU screen. This button will function only when AQUOS LINK is used.

13 **REC STOP:** Stops one touch recording. This button will function only when AQUOS LINK is used.

14 **SLEEP:** Set the sleep timer.

15 **SURROUND:** Select Surround settings.

16 **AUDIO:** Selects the MTS/SAP or the audio mode during multi-channel audio broadcasts.

17 **FUNCTION:** Switches the remote control for TV, CBL/SAT, VCR, DVD and AUDIO operation. Indicator lights up for the current mode.

* To enter the code registration mode, you need to press **FUNCTION** and **DISPLAY** at the same time.

18 **LIGHT** ☼ : When this button is pressed, some buttons (for example, **VOL+** / **–** and **CH** ∧ / ∨) on the remote control unit will light. The lighting will turn off if no operations are performed within about 5 seconds. This button is used for performing operations in low-light situations.

19 **VIEW MODE:** Select the screen size.

20 **ENT:** Jumps to a channel after selecting with the **0**–**9** buttons.

21 **FLASHBACK:** Return to the previous channel or external input mode.

22 **CH** ∧ / ∨ : Select the channel.

23 **MUTE:** Mute the sound.

24 **MENU:** Display the menu screen.

25 ▲ / ▼ / ◀ / ▶, ENTER: Select a desired item on the screen.

26 **RETURN:** Return to the previous menu screen.

27 **FAVORITE CH**

A, **B**, **C**, **D:** Select 4 preset favorite channels in 4 different categories.

While watching, you can toggle the selected channels by pressing **A**, **B**, **C** and **D**.

28 **FAVORITE:** Set the favorite channels.

29 **CC:** Display captions from a closed-caption source.

30 **AV MODE:** Select an audio or video setting.
(When the input source is TV, INPUT 1, 2 or 3: STANDARD, MOVIE, GAME, USER, DYNAMIC (Fixed), DYNAMIC. When the input source is INPUT 4, 5, 6, 7, 8 or 9: STANDARD, MOVIE, GAME, PC, USER, DYNAMIC (Fixed), DYNAMIC)

NOTE

- When using the remote control unit, point it at the TV.

QUICK REFERENCE

Attaching the Stand

- Before attaching (or detaching) the stand, unplug the AC cord from the AC INPUT terminal.
- Before performing work spread cushioning over the base area to lay the TV on. This will prevent it from being damaged.

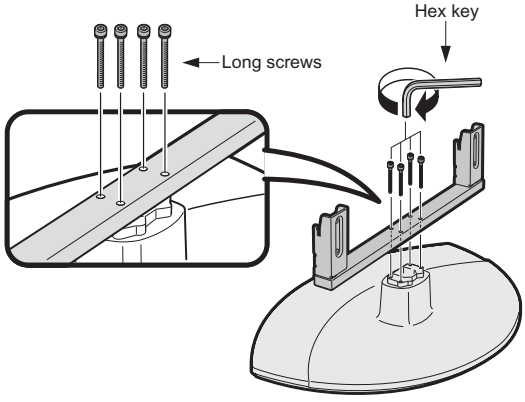
CAUTION

- **Attach the stand in the correct direction.**
- **Do not remove the stand from the TV unless using an optional wall mount bracket to mount it.**
- **Be sure to follow the instructions. Incorrect installation of the stand may result in the TV falling over.**

1 Confirm that there are 8 screws (4 short screws and 4 long screws) and a hex key supplied with the stand unit.

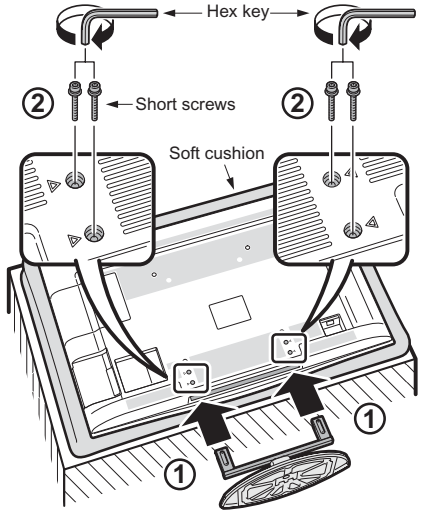
2 Attach the supporting post for the stand unit onto the base using the box for the stand unit as shown below.

- The supporting post attaches to the base at an off-centered location on the base. Be sure to attach the supporting post in the direction indicated below and attach the stand to the TV with the wider side of the base facing forward.



3 ① Insert the stand into the openings on the bottom of the TV.

② Insert and tighten the 4 short screws into the 4 holes on the rear of the TV.



NOTE

- To detach the stand, perform the steps in reverse order.

Appendix

Removing the Stand

- Before detaching (or attaching) the stand, unplug the AC cord from the AC INPUT terminal.

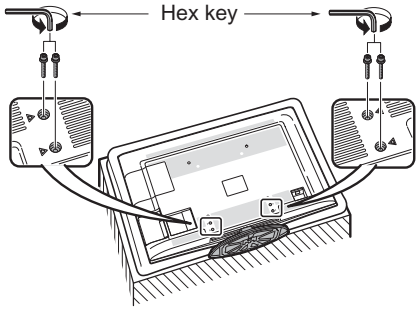
CAUTION

- **Do not remove the stand from the TV unless using an optional wall mount bracket to mount it.**

Before attaching/detaching the stand

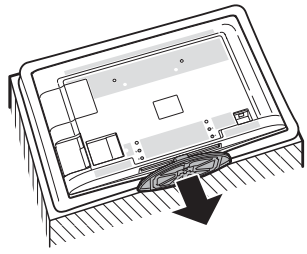
- Before performing work, make sure to turn off the TV.
- Before performing work spread cushioning over the base area to lay the TV on. This will prevent it from being damaged.

1



Unfasten the four screws used to secure the stand in place.

2



Detach the stand from the TV. (Hold the stand so it will not drop from the edge of the base area.)

NOTE

- To attach the stand, perform the above steps in reverse order.

Setting the TV on the Wall

CAUTION

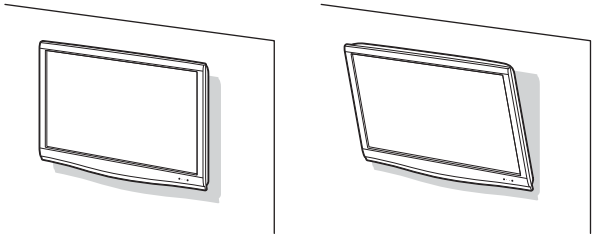
- **This TV should be mounted on the wall only with the wall mount bracket AN-52AG4 (SHARP). The use of other wall mount brackets may result in an unstable installation and may cause serious injuries.**
- **Installing the TV requires special skill that should only be performed by qualified service personnel. Customers should not attempt to do the work themselves. SHARP bears no responsibility for improper mounting or mounting that results in accident or injury.**

Using an optional bracket to mount the TV

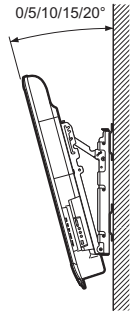
- You can ask a qualified service professional about using an optional AN-52AG4 bracket to mount the TV on the wall.
- Carefully read the instructions that come with the bracket before beginning work.

Hanging on the wall

AN-52AG4 wall mount bracket.
(See the bracket instructions for details.)



About setting the TV angle



LC-46E77U

- The " b " position is at the center of the display.

LC-52E77U

- The center of the display: $^{19}/_{64}$ inch (7.3 mm) under the " f " position.
- Refer to the operation manual of AN-52AG4 for details.

NOTE

- Detach the cable clamp on the rear of the TV when using the optional mount bracket.
- To use this TV mounted on a wall, remove the covers at the 4 locations on the rear of the TV, and then use the screws supplied with the wall mount bracket to secure the bracket to the rear of the TV.

Appendix

Troubleshooting

Problem	Possible Solution
• No power	• Check if you pressed **TV POWER** on the remote control unit. If the indicator on the TV does not light up, press **POWER** on the TV. • Is the AC cord disconnected? • Has the power been turned on?
• Unit cannot be operated.	• External influences such as lightning, static electricity, may cause improper operation. In this case, operate the unit after first turning off the power of the TV or unplugging the AC cord and replugging it in after 1 or 2 minutes.
• Remote control unit does not operate.	• Is the **FUNCTION** set correctly? Set it to the TV setting position. • Are batteries inserted with polarity (+, -) aligned? • Are batteries worn out? (Replace with new batteries.) • Are you using it under strong or fluorescent lighting? • Is a fluorescent light illuminated near the remote control sensor?
• Picture is cut off/with sidebar screen.	• Is the image position correct? • Are screen mode adjustments such as picture size made correctly?
• Strange color, light color, or color misalignment	• Adjust the picture tone. • Is the room too bright? The picture may look dark in a room that is too bright.
• Power is suddenly turned off.	• Is the sleep timer set? • Check the power control settings. • The unit's internal temperature has increased. Remove any objects blocking vent or clean.
• No picture	• Is connection to other components correct? • Is correct input signal source selected after connection? • Is the correct input selected? • Is picture adjustment correct? • Is “On” selected in “Audio Only”? • Is a non-compatible signal being input?
• No sound	• Is the volume too low? • Is “Variable” selected in “Output Select”? • Have you pressed **MUTE** on the remote control unit?
• The TV sometimes makes a cracking sound.	• This is not a malfunction. This happens when the cabinet slightly expands and contracts according to change in temperature. This does not affect the TV's performance.

Troubleshooting-Digital Broadcasting

The error message about reception of broadcast

The example of an error message displayed on a screen	Error code	Possible Solution
• Failed to receive broadcast.	**E202**	• Check the antenna cable. Check that the antenna is correctly setup.
• No broadcast now.	**E203**	• Check the broadcast time in the program guide.

Cautions regarding use in high and low temperature environments

- When the unit is used in a low temperature space (e.g. room, office), the picture may leave trails or appear slightly delayed. This is not a malfunction, and the unit will recover when the temperature returns to normal.
- Do not leave the unit in a hot or cold location. Also, do not leave the unit in a location exposed to direct sunlight or near a heater, as this may cause the cabinet to deform and the Liquid Crystal panel to malfunction.
  Storage temperature: -4°F to +140°F (-20°C to +60°C)

On-Screen Display Menu

Menu Items

For TV/INPUT 1/2/3 Mode

Picture Menu

OPC
Backlight
Contrast
Brightness
Color
Tint
Sharpness
Advanced
- C.M.S.-Hue
- C.M.S.-Saturation
- C.M.S.-Value
- Color Temp
- Fine Motion Enhanced
- Active Contrast
- Gamma Adjustment
- Film Mode
- Digital Noise Reduction
- 3D-Y/C
- Monochrome
- Range of OPC

Reset

Audio Menu

Treble
Bass
Balance
Surround
Bass Enhancer
Reset

Power Control Menu

Power Saving
No Signal Off
No Operation Off

Setup Menu

EZ Setup
CH Setup
Antenna Setup-DIGITAL
Input Skip
Input Label
Parental CTRL
Position
Language
Reset

Option Menu

AQUOS LINK Setup
Audio Only
Input Select
PC Audio Select
Output Select
Color System
Caption Setup
Digital Caption Info
Program Title Display
Favorite CH
Game Play Time
Operation Lock Out
Demo Mode

Digital Setup Menu

Audio Setup
Identification
Software Update

For HDMI/PC-IN Mode

Picture Menu

OPC
Backlight
Contrast
Brightness
Color
Tint
Sharpness
Advanced
- C.M.S.-Hue
- C.M.S.-Saturation
- C.M.S.-Value
- Color Temp
- Fine Motion Enhanced
- Active Contrast
- Gamma Adjustment
- Film Mode
- Digital Noise Reduction
- Monochrome
- Range of OPC

Reset

Audio Menu

Treble
Bass
Balance
Surround
Bass Enhancer
Reset

Power Control Menu

Power Saving
No Signal Off
No Operation Off

Setup Menu

Input Skip
Auto Sync
Input Label
Fine Sync
Position
Language
Reset

Option Menu

AQUOS LINK Setup
Audio Only
HDMI Setup
PC Audio Select
Output Select
Game Play Time
Operation Lock Out
Demo Mode

Digital Setup Menu

Software Update

NOTE

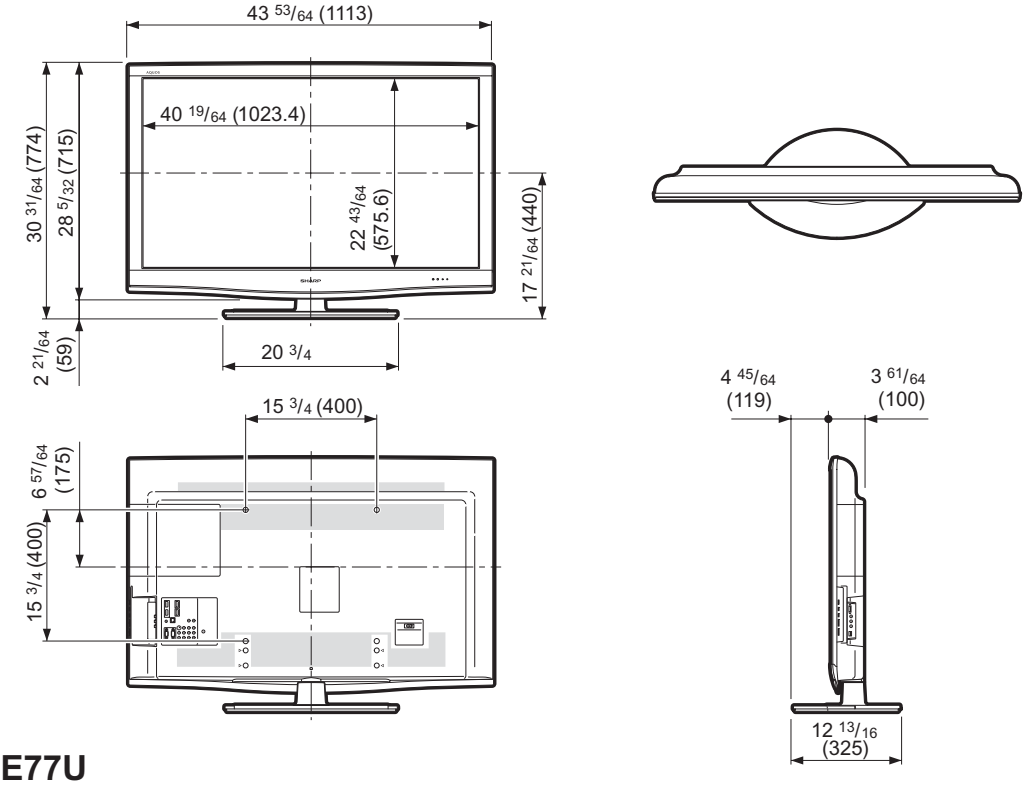
- Some menu items may not be displayed depending on the selected input source.

CHAPTER 3. DIMENSIONS

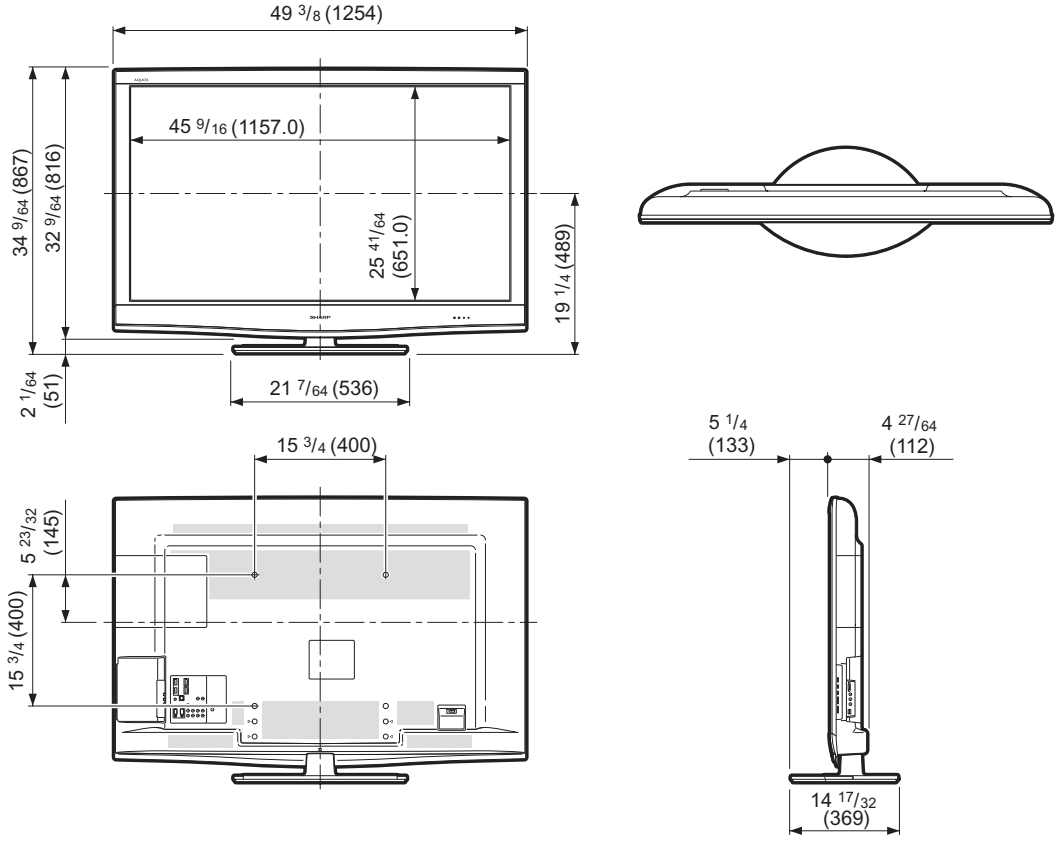
[1] DIMENSIONS

Unit: inch (mm)

LC-46E77U



LC-52E77U

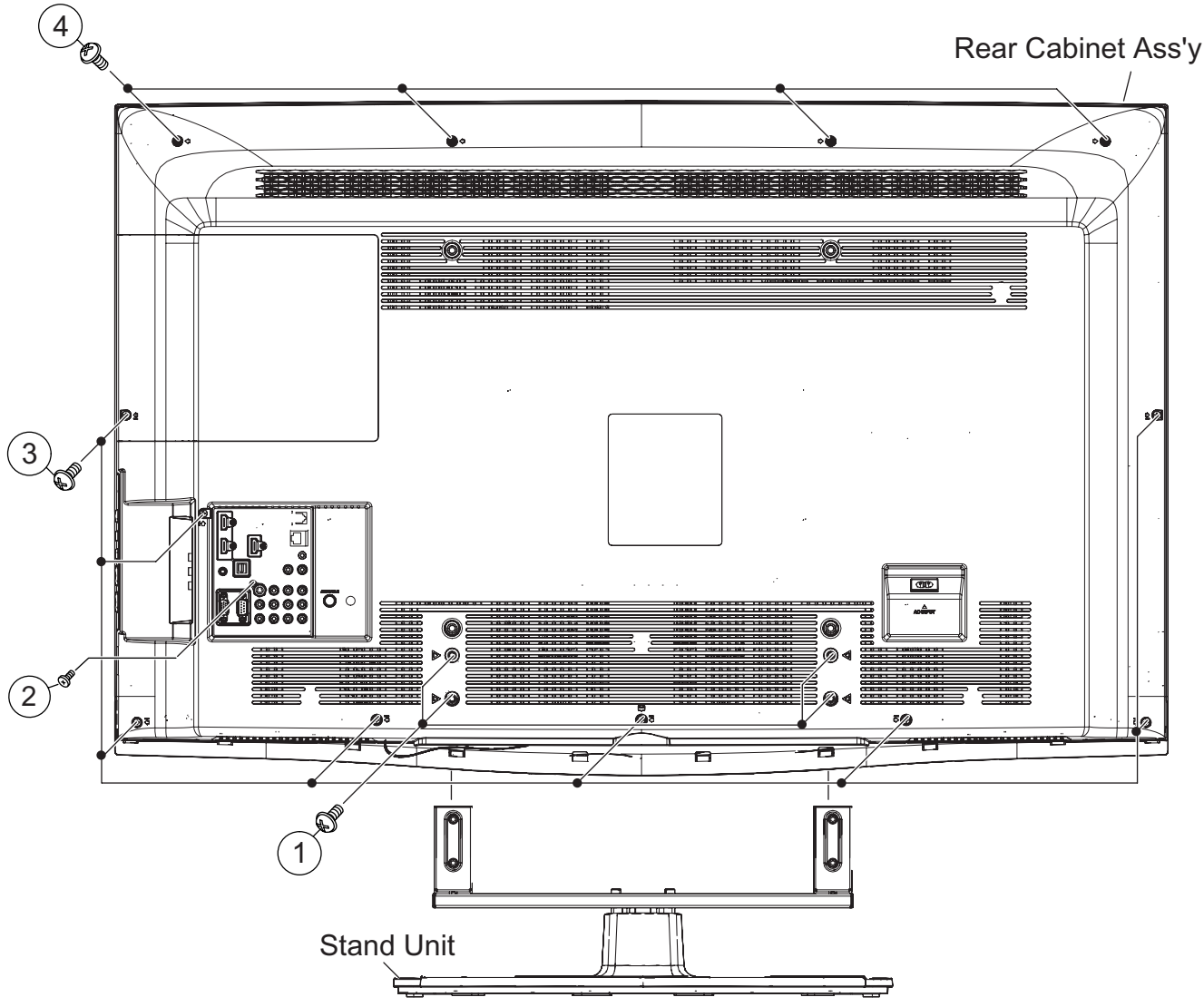


CHAPTER 4. REMOVING OF MAJOR PARTS

[1] REMOVING OF MAJOR PARTS (LC-46E77U)

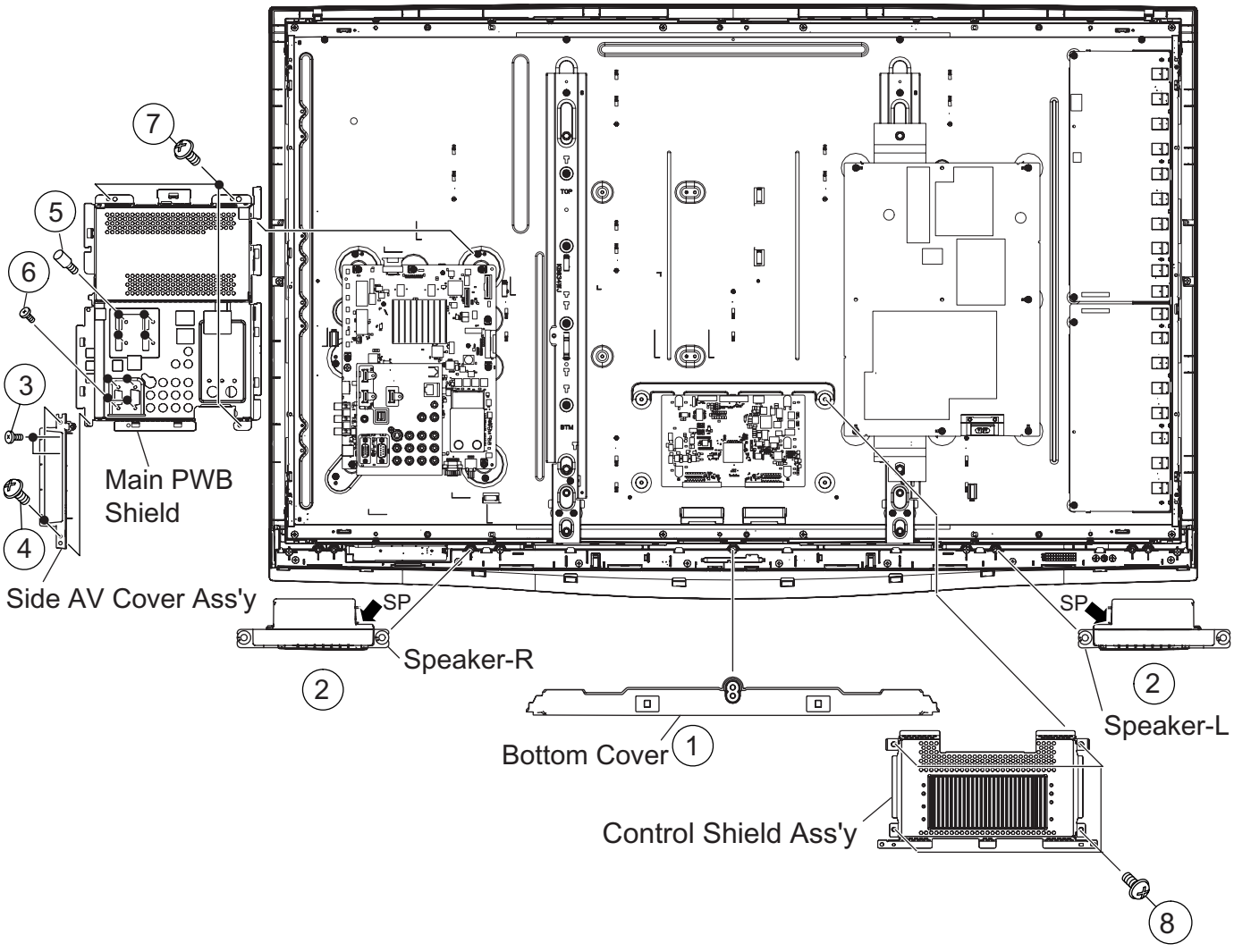
1. Removing of Stand Unit and Rear Cabinet Ass'y.

1. Remove the 4 lock screws ① and detach the Stand Unit .
2. Remove the 1 lock screw ② , 8 lock screws ③ , 4lock screws ④ and detach the Rear Cabinet Ass'y.



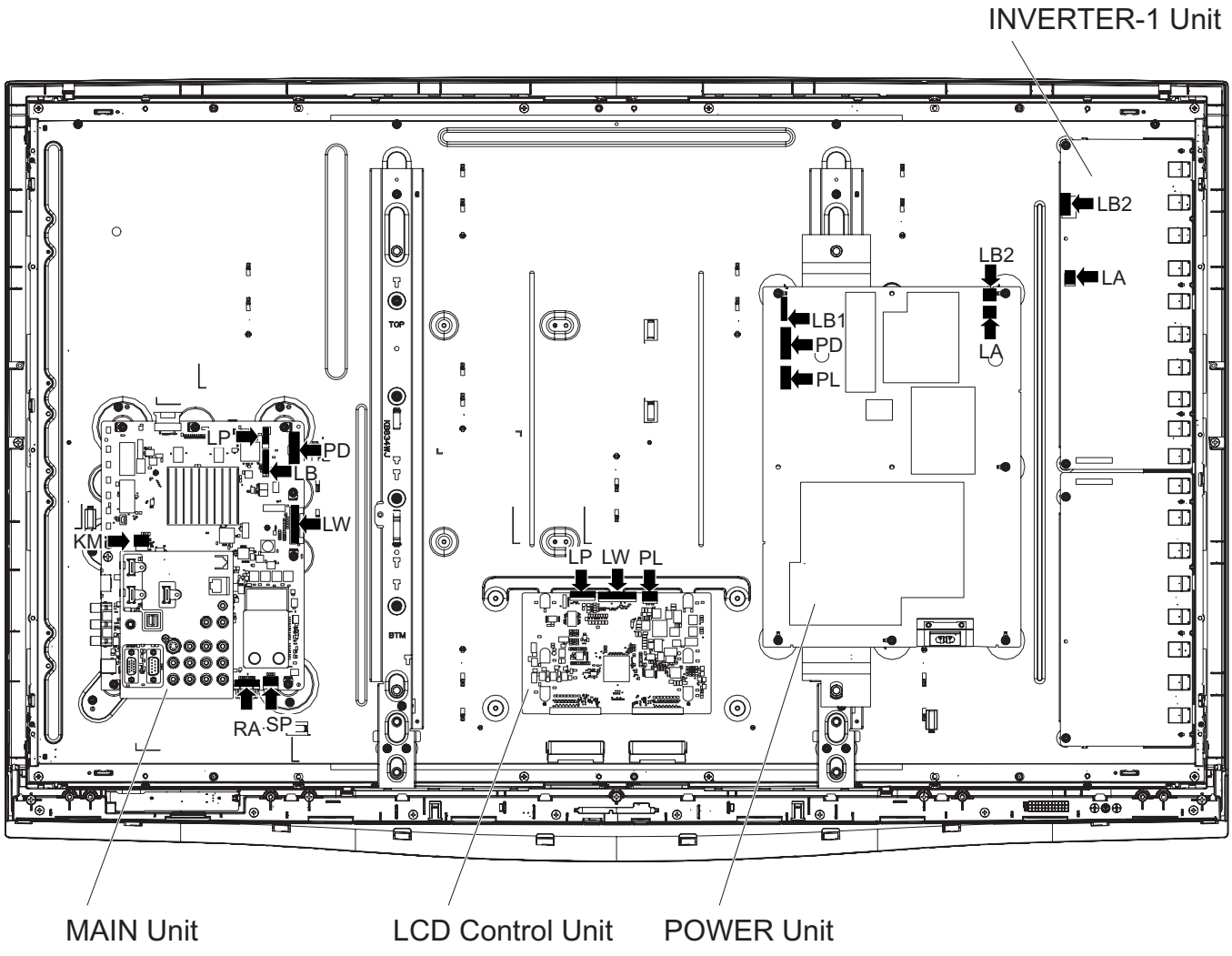
2. Removing of Bottom Cover, Side AV Civer, Main PWB Shield and Control Shield.

1. Detach the Bottom Cover ① .
2. Disconnect SP wire. Detacht the Speaker-L/R ② .
3. Remove the 2 lock screws ③ , 2 lock screws ④ and detach the Side AV Cover Ass'y.
4. Remove the 4 lock screws ⑤ , 4 lock screws ⑥ , 3 lock screws ⑦ and detach the Main PWB Shield.
5. Remove the 4 lock screws ⑧ , and detach the Control Shield Ass'y.



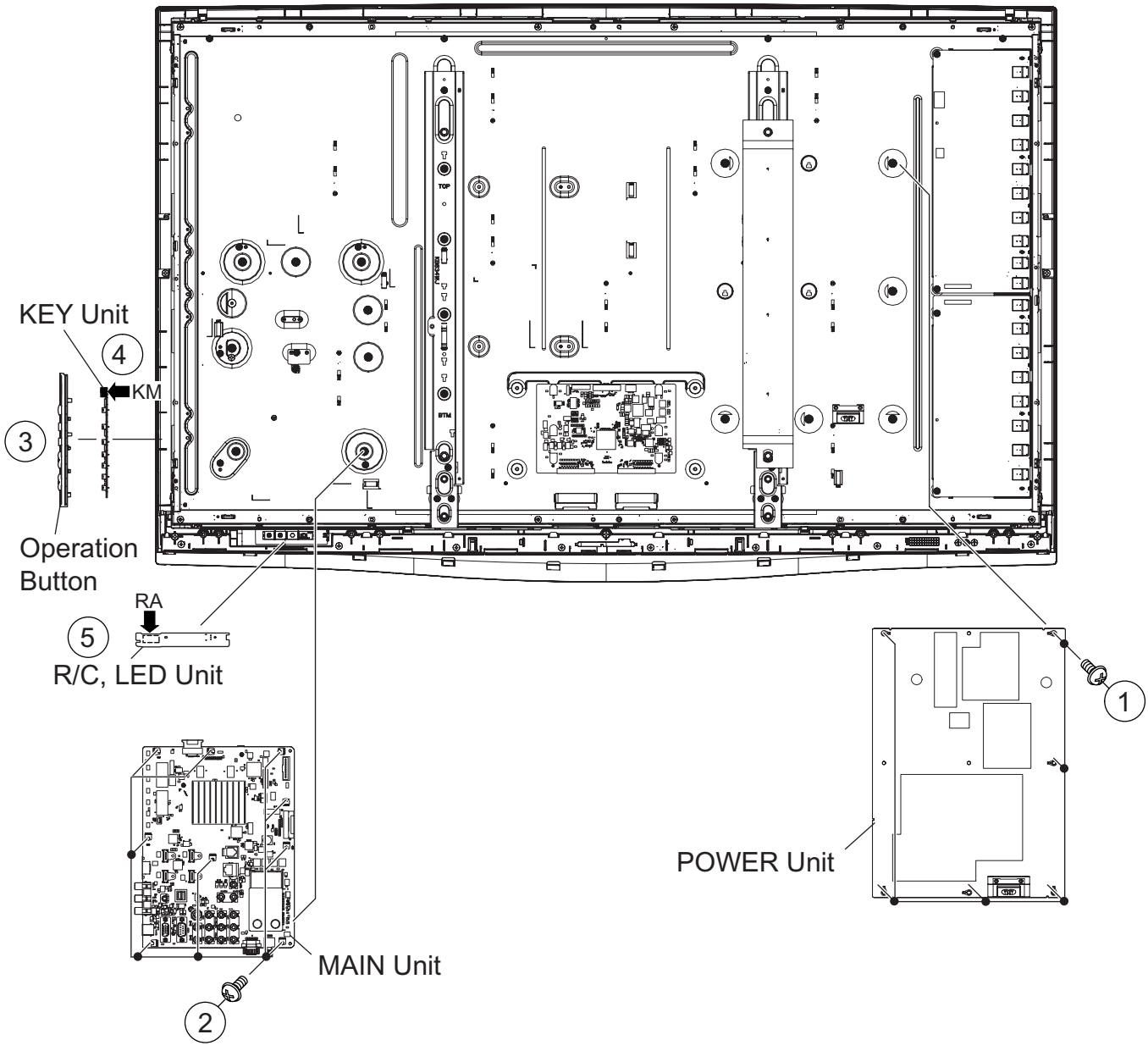
3. Removing of Connectors.

1. Disconnect the following connectors from MAIN Unit. (LB, LP, PD, LW, RA, KM, SP)
2. Disconnect the following connectors from POWER Unit. (LB1, PD, PL, LB2, LA)
3. Disconnect the following connectors from INVERTER-1 Unit. (LB2, LA)
4. Disconnect the following connectors from LCD Control Unit. (LP, LW, PL)



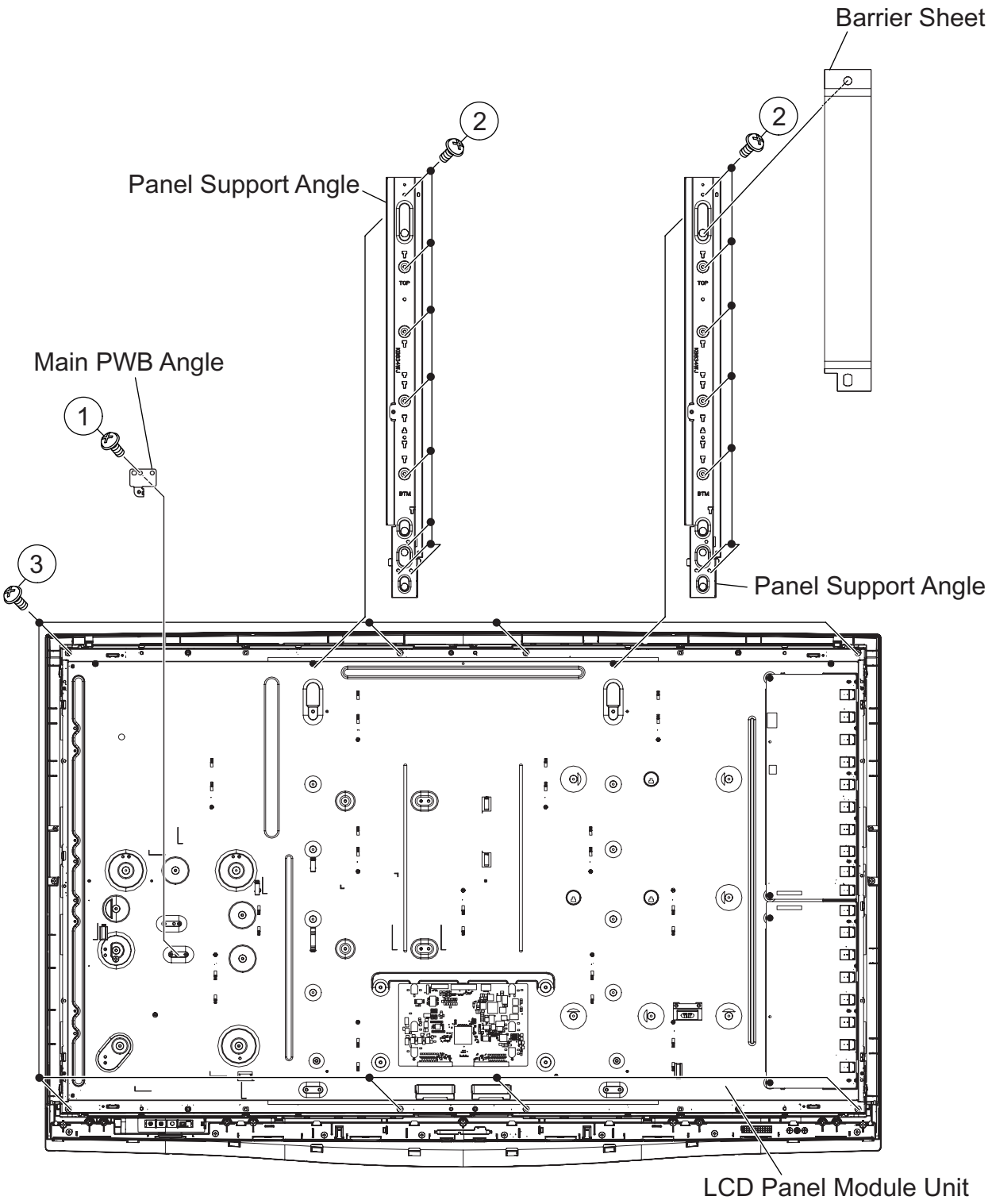
4. Removing of POWER Unit , MAIN Unit, KEY Unit Ass'y and R/C, LED Unit.

1. Remove the 6 lock screws ① and detach the POWER Unit.
2. Remove the 9 lock screws ② are detach the MAIN Unit.
3. Detach the KEY Unit Ass'y ③ .
4. Detach the KEY Unit From Operation Button and disconnect KM wire ④ .
5. Detach the R/C LED Unit and disconnect RA wire ⑤ .



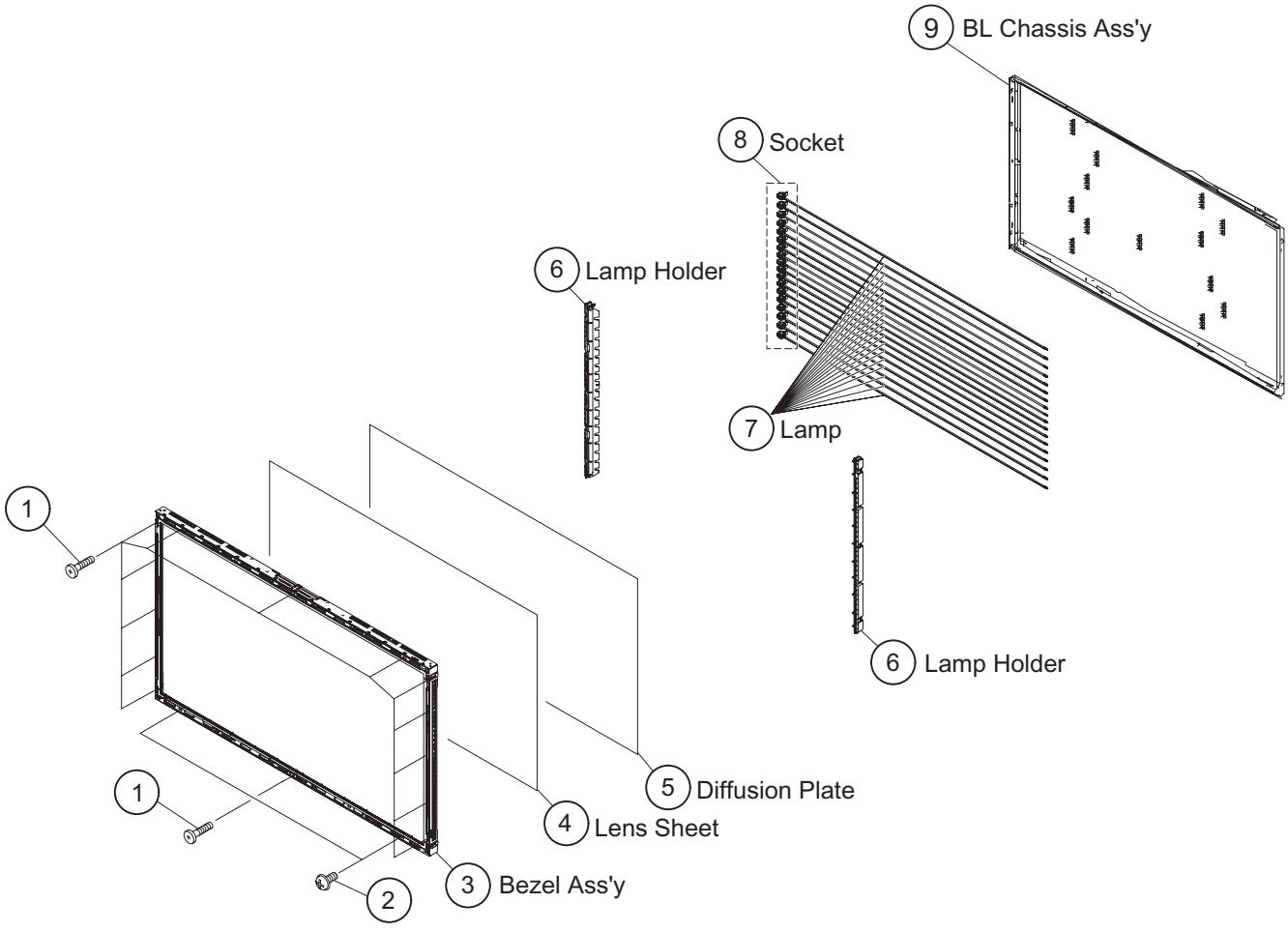
5. Removing of Main PWB Angle, Panel Support Angle, Barrier Sheet and LCD Panel Module Unit.

1. Remove the 1 lock screw ① and detach the Main PWB Angle.
2. Detach the Barrier Sheet from Panel Support Angle. Remove the 16 lock screws ② and detach the Panel Support Angle.
3. Remove the 8 lock screws ③ and detach the LCD Panel Module Unit.



6. Removing of LCD Panel Module.

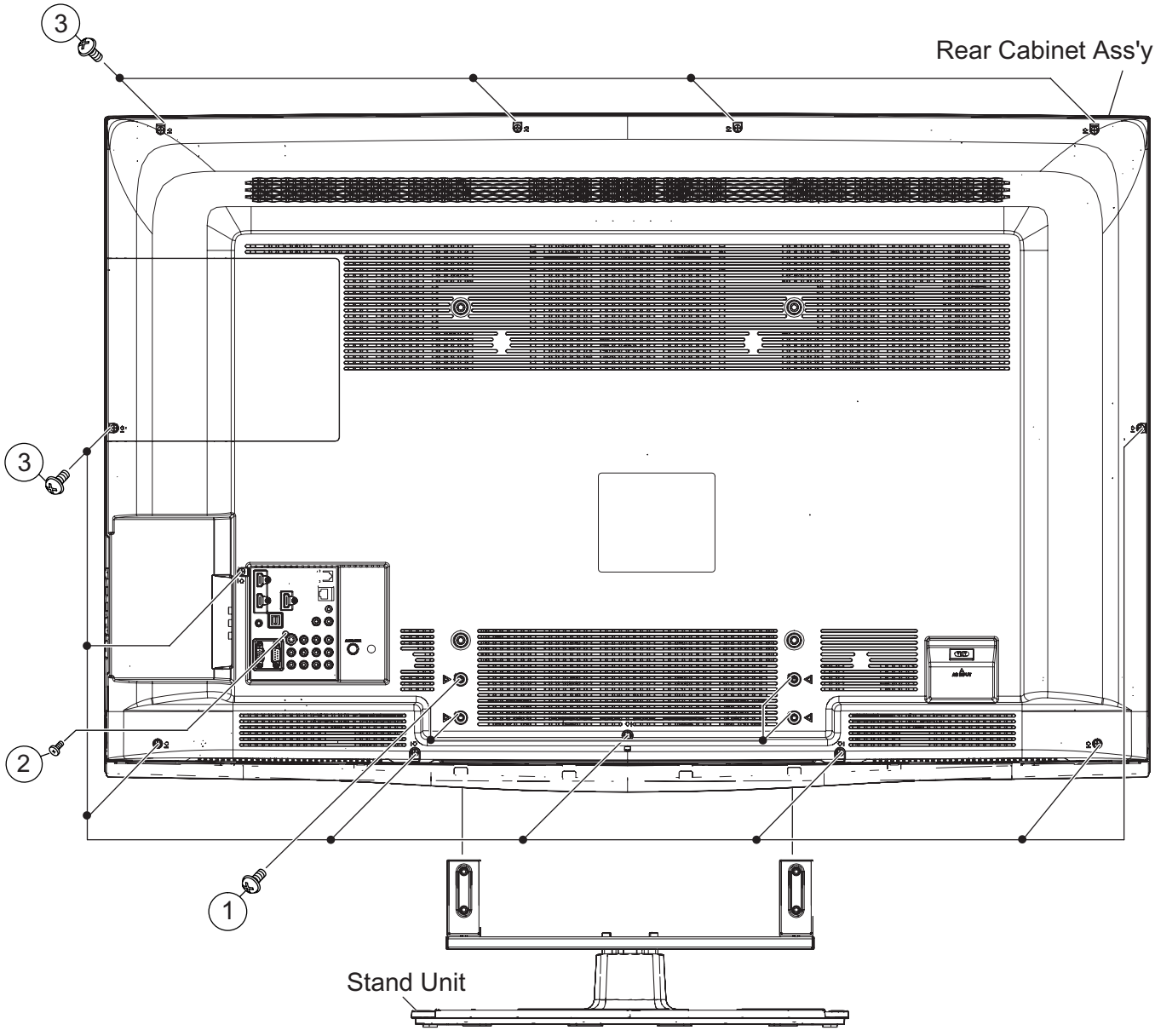
1. Remove the 14 lock screws ① , 2 lock screws ② and detach the Bezel Ass'y ③ .
2. Detach the Lens Sheet ④ and Diffusion Plate ⑤ .
3. Detach the 2 pieces Lamp Holder ⑥ , Socket ⑧ and detach the following 18 pieces Lamp ⑦ from BL Chassis Ass'y ⑨ .



[2] REMOVING OF MAJOR PARTS (LC-52E77U)

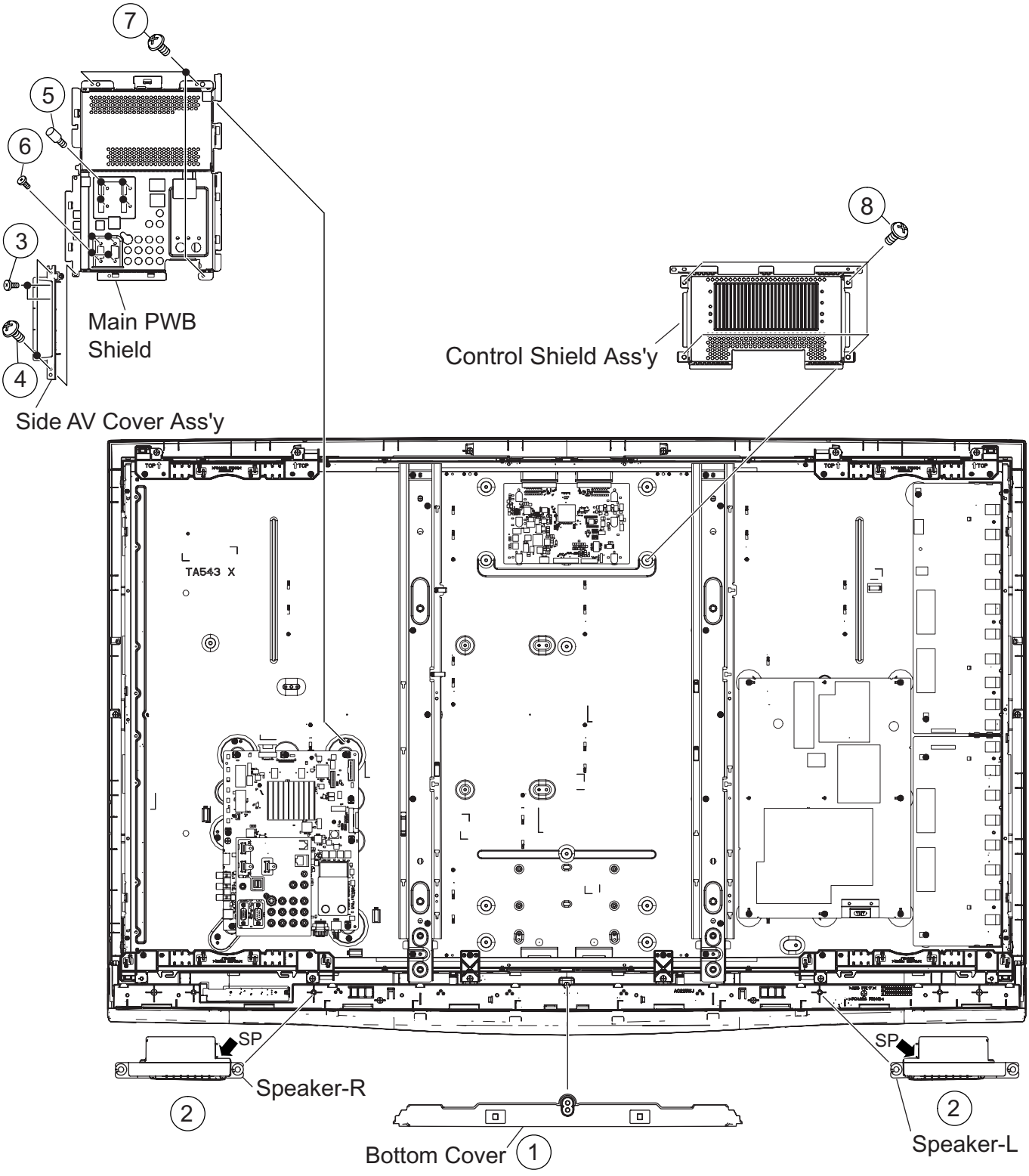
1. Removing of Stand Unit and Rear Cabinet Ass'y.

1. Remove the 4 lock screws ① and detach the Stand Unit .
2. Remove the 1 lock screw ② , 12 lock screws ③ , and detach the Rear Cabinet Ass'y.



2. Removing of Bottom Cover, Side AV Civer, Main PWB Shield and Control Shield.

1. Detach the Bottom Cover ① .
2. Disconnect SP wire. Detacht the Speaker-L/R ② .
3. Remove the 2 lock screws ③ , 2 lock screws ④ and detach the Side AV Cover Ass'y.
4. Remove the 4 lock screws ⑤ , 4 lock screws ⑥ , 3 lock screws ⑦ and detach the Main PWB Shield.
5. Remove the 4 lock screws ⑧ , and detach the Control Shield Ass'y.



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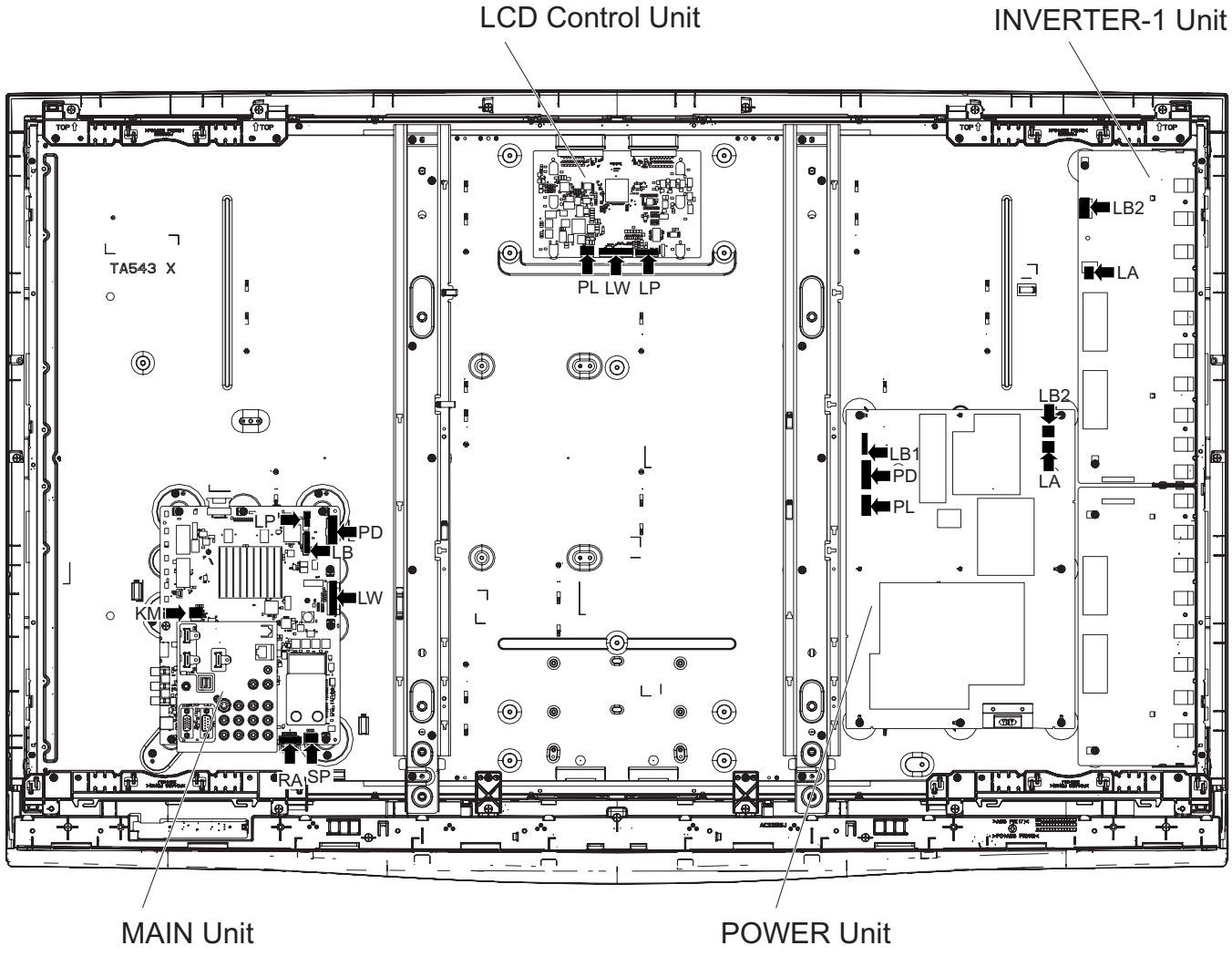
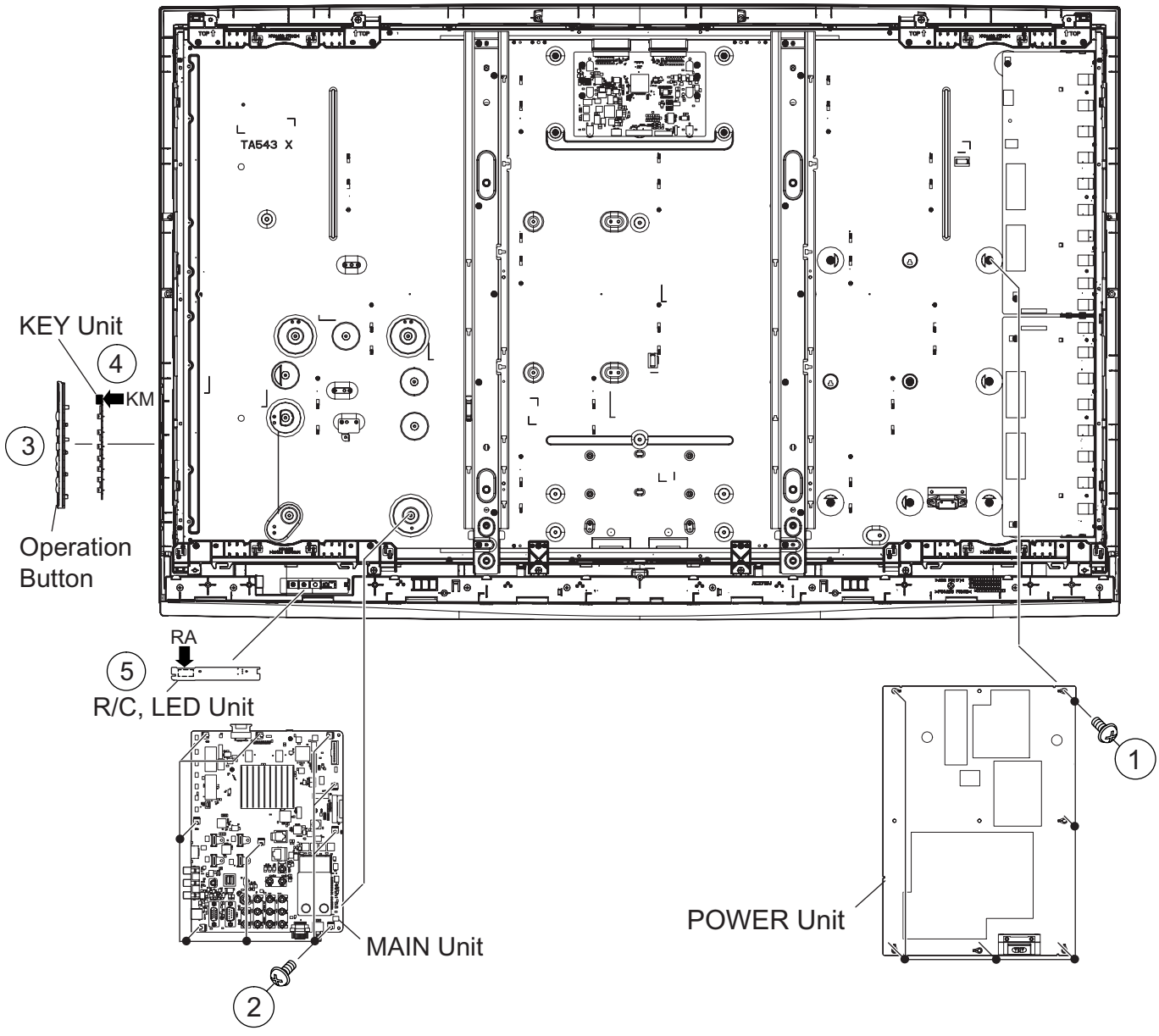


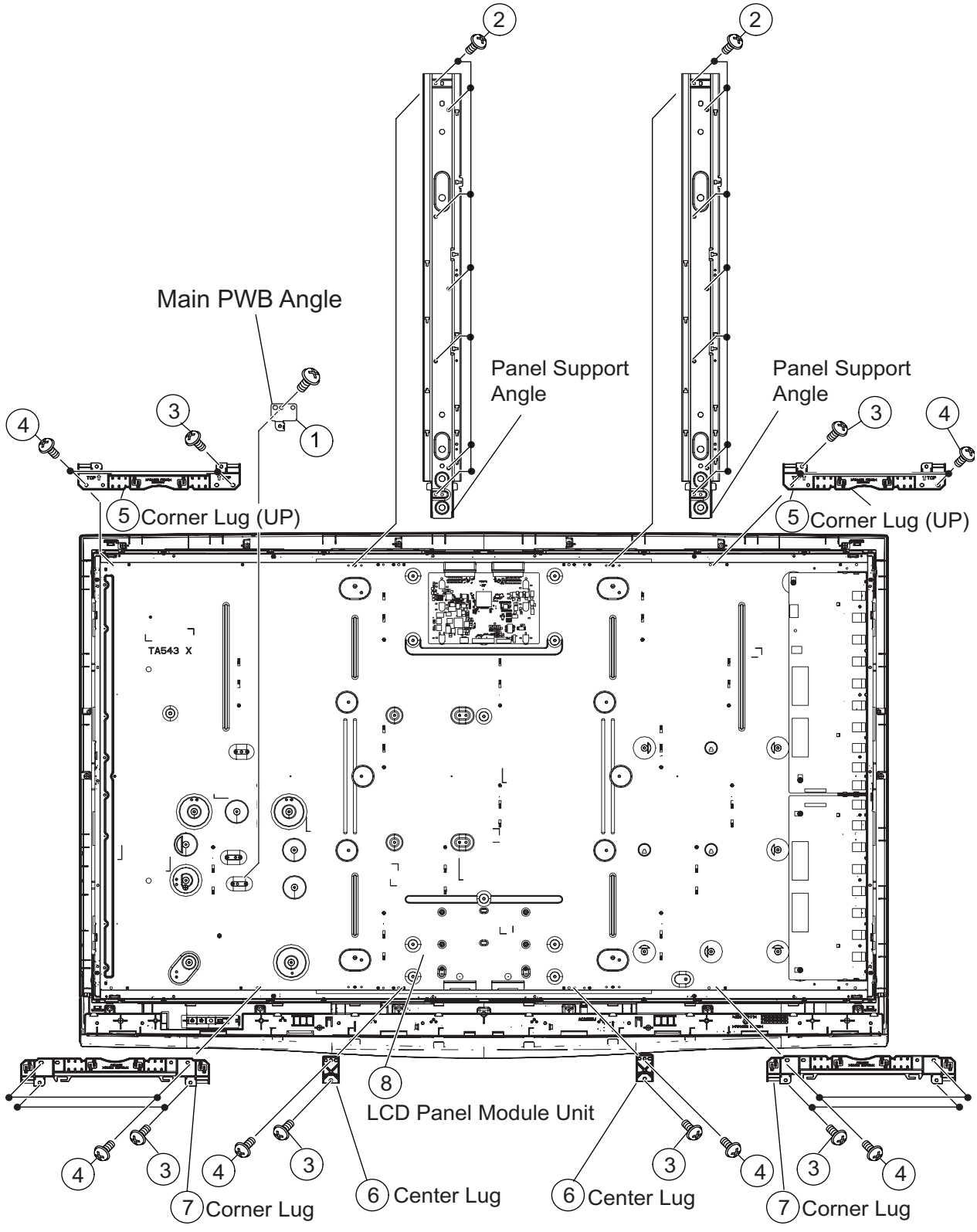
4. Removing of POWER Unit , MAIN Unit, KEY Unit Ass'y and R/C, LED Unit.

1. Remove the 6 lock screws ① and detach the POWER Unit.
2. Remove the 9 lock screws ② are detach the MAIN Unit.
3. Detach the KEY Unit Ass'y ③ .
4. Detach the KEY Unit From Operation Button and disconnect KM wire ④ .
5. Detach the R/C LED Unit and disconnect RA wire ⑤ .



5. Removing of Main PWB Angle, Panel Support Angle, Barrier Sheet and LCD Panel Module Unit.

1. Remove the 1 lock screw ① and detach the Main PWB Angle.
2. Remove the 14 lock screws ② and detach the Panel Support Angle.
3. Remove the 8 lock screws ③ , 10 lock screws ④ and detach the Corner Lug (UP) ⑤ , Center Lug ⑥ and Corner Lug ⑦ .
4. Detach the LCD Panel Module Unit ⑧ .



6. Removing of LCD Panel Module.

1. Remove the 16 lock screws ① , 2 lock screws ② and detach the Bezel Ass'y ③ .
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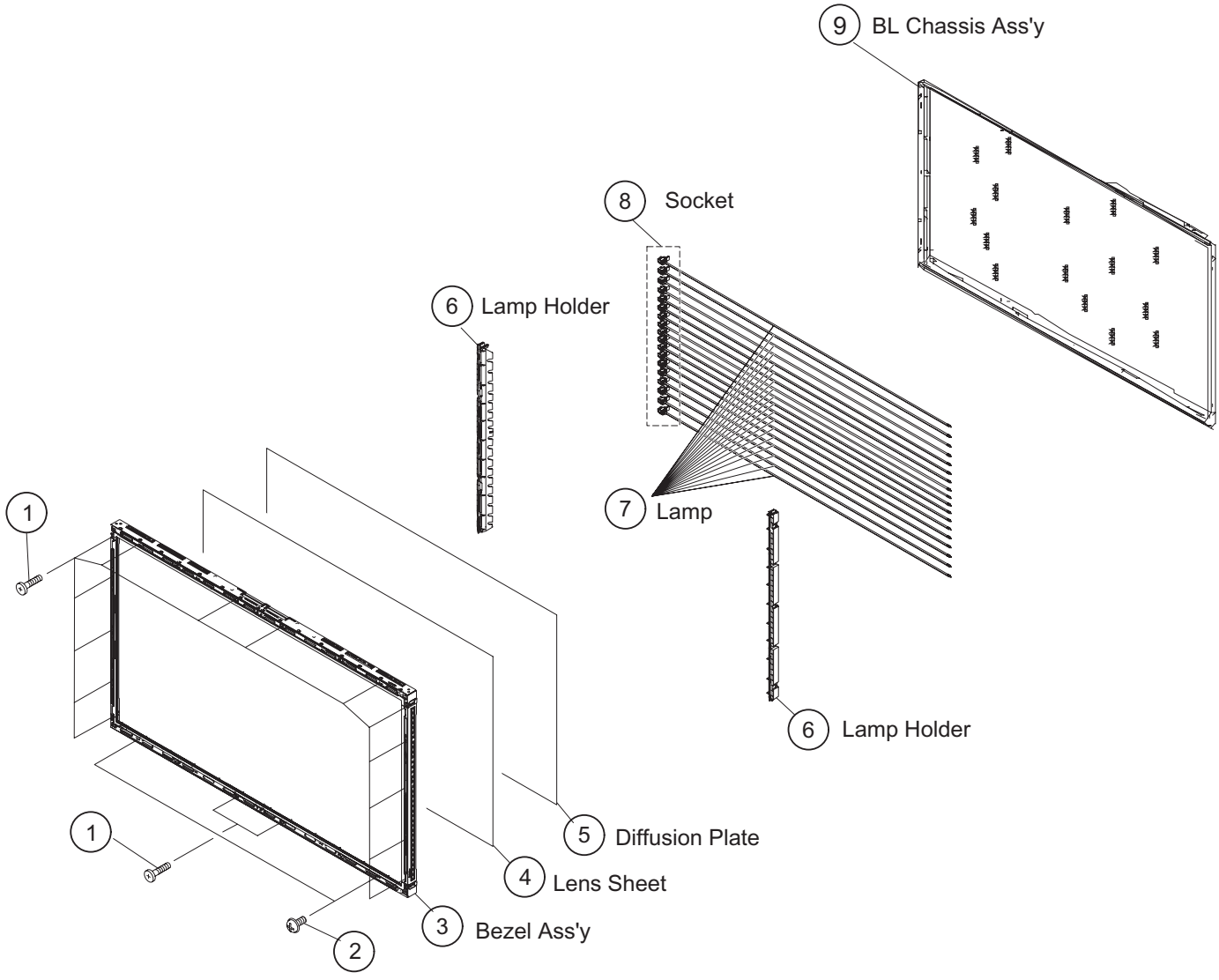


CHAPTER 5. ADJUSTMENT

[1] ADJUSTMENT PROCEDURE

The adjustment values are set to the optimum conditions at the factory before shipping. If a value should become improper or an adjustment is required due to part replacement, make an adjustment according to the following procedure.

1. After replacement of any PWB unit and/or IC for repair, please note the following.

• When replacing the following units, make sure to prepare the new units loaded with updated software.

MAIN Unit: DUNTKE833FM03

• When replacing the LCD control PWB, perform the VCOM adjustment.

2. Upgrading of each microprocessor software

CAUTION: Never “POWER OFF” the unit when software upgrade is ongoing.

Otherwise the system may be damaged beyond recovery.

2.1. Software version upgrade

The model employs the following software.

- Main software (please use a software version after HLNAA200.USB.)
- Monitor microprocessor software (please use a software version after HLNAVA05.USB and HLNAM300.BIN.)

The main software, monitor microprocessor software can be upgraded by using a general-purpose USB Memory.

The followings are the procedures for upgrading, explained separately for the main software, monitor microprocessor software.

2.2. Main software version upgrade

2.2.1 Get ready before you start

- USB Memory of 128MB or higher capacity.
- PC running on Windows 98/98SE/ME/2000/XP operating system.
- USB Memory reader/writer or PC with a USB port.
- The file system of a USB memory is FAT. (FAT32 supports)
- Use the USB memory without other functions. (lock and memory reader...etc)

2.2.2 Preparations

To upgrade the main software, it is necessary to get ready the USB Memory for version upgrade before you start.

Follow the steps below and create the USB Memory for version upgrade.

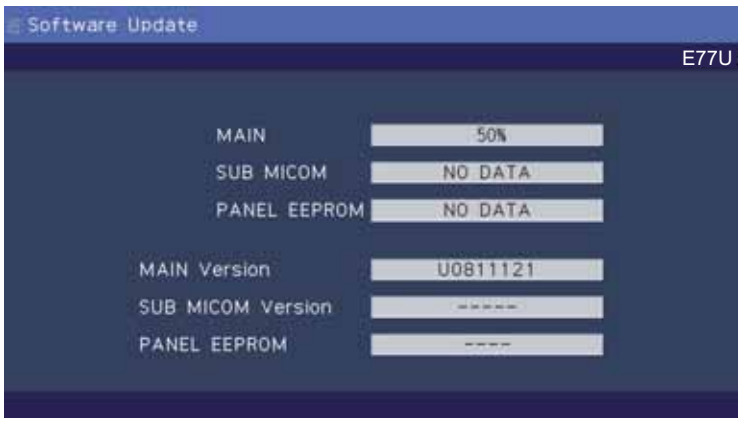
1. Copy the file HLNAAxxx.USB for version upgrade to the root directory (folder) of the USB Memory.

NOTE: In the USB Memory drive, do not store other folders or unrelated files, or more than one file for version upgrade.

Now the USB Memory for version upgrade is ready.

2.2.3 How to upgrade the software

1. Unplug the AC cord.
2. Insert the USB Memory for version upgrade (prepared as above) into the service socket located Right side of Main Board terminals, under INPUT3 terminal.
3. Plug in the AC cord with power button pressed down after 5 seconds, unpress the power button.
4. After the unit startup, the system upgrade screen as shown below appears within 20-40 seconds.



5. Even a single failure in the process will trigger the upgrade failure screen.

NOTE: In the event of a failure, repeat the upgrade process. If the process repeatedly fails, it is likely that the hardware need fixing.

6. Upon completion of the whole process, the upgrade success screen as shown below appears. You can check the new software version on this screen. The version information appears after the upgrade is complete.

7. Unplug the AC cord and remove the USB Memory for version upgrade.
8. Now the software version upgrade is complete.

NOTE: When you are done with the software version upgrade, start the set, go to the top page of the adjustment process screen and check the main software version information.

2.3. Monitor microprocessor software version upgrade

Create the USB memory for monitor microprocessor software version upgrade in the same manner as explained in the “Main software version upgrade”.

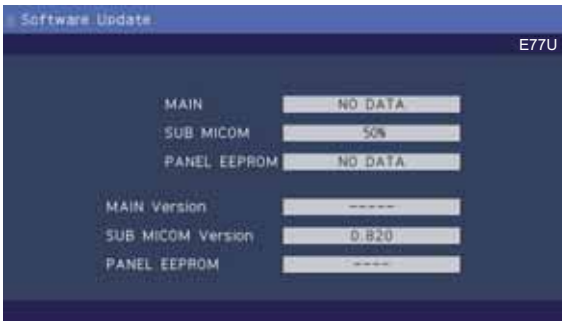
Copy the file HLNAVAxx.USB and HLNAMxxx.BIN (named temporarily) for monitor microprocessor software version upgrade to the USB memory.

2.3.1 How to upgrade the software

1. Unplug the AC cord.
2. Insert the USB Memory for version upgrade (prepared as above) into the service socket located Right side of Main Board terminals, under INPUT3 terminal.
3. Plug in the AC cord with power button pressed down.
4. After 5 seconds, unpress the power button.

CAUTION:
- The moment this operation is done, the upgrading of the monitor microprocessor software starts. While the upgrade is ongoing, never power off the unit. Otherwise the upgrade will fail and the system may be serious damaged beyond recovery (inability to start).
- After the monitor microprocessor software is upgraded, also perform the 'Industry Init'.

5. After the unit startup, the upgrade starts. The power led will blink continuously. Also, an upgrade screen will be shown during a minor upgrade.



6. If the upgrade fails, power led will stop blinking. Also, the upgrade failure screen will be shown if upgrade screen was shown at 5.

NOTE: In the event of a transient failure, upgrade will be automatically retried up to three times. If the process repeatedly fails, hardware may be the cause.

7. Up on completion of the whole process, power and OPC LED will blink alternately. Also, the upgrade success screen will be shown if upgrade screen was shown at 5.

8. Unplug the AC cord and remove the USB Memory for version upgrade.
9. Now the software version upgrade is complete.

NOTE: When you are done with the software version upgrade, start the set, go to the top page of the adjustment process screen and check the monitor microprocessor software version information and panel size information.

3. Entering and exiting the adjustment process mode

1) Before entering the adjustment process mode, the AV position RESET in the video adjustment menu.
2) While holding down the “VOL (–)” and “INPUT” keys at a time, plug in the AC cord of the main unit to turn on the power.

   The letter “<K>” appears on the screen.
3) Next, hold down the “VOL (–)” and “CH (⌄)” keys at a time.

   (The “VOL (–)” and “CH (⌄)” keys should be pressed and held until the display appears.)

   Multiple lines of blue characters appearing on the display indicate that the unit is now in the adjustment process mode.

   When you fail to enter the adjustment process mode (the display is the same as normal startup), retry the procedure.
4) To exit the adjustment process mode after the adjustment is done, unplug the AC cord from the outlet to make a forced shutdown. (When the power was turned off with the remote controller, once unplug the AC cord and plug it again. In this case, wait 10 seconds or so before plugging.)

CAUTION: Use due care in handling the information described here lest your users should know how to enter the adjustment process mode. If the settings are tampered in this mode, unrecoverable system damage may result.

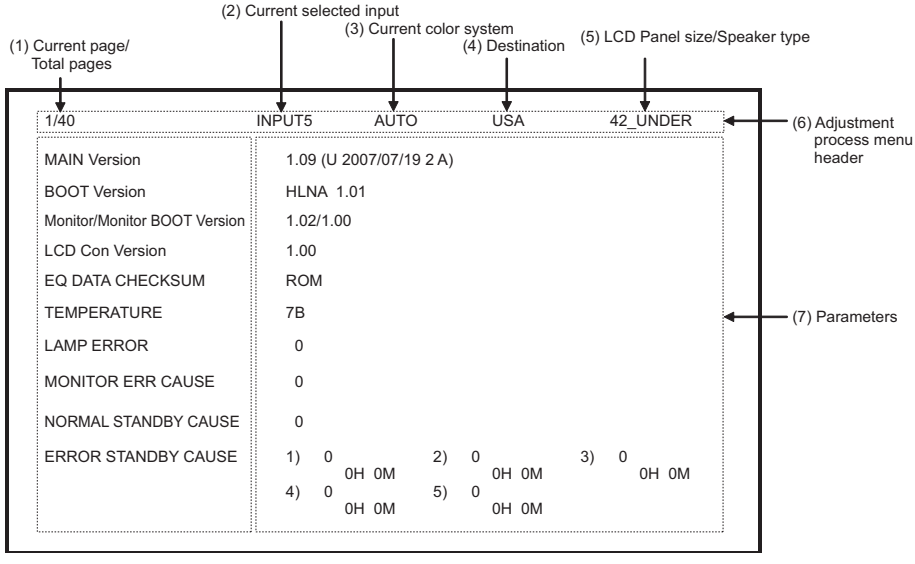
4. Remote controller key operation and description of display in adjustment process mode

1) Key operation

Remote controller key	Main unit key	Function
CH (⌄ / ⌃)	CH (⌄ / ⌃)	Moving an item (line) by one (UP/DOWN)
VOL (+/–)	VOL (+/–)	Changing a selected item setting (+1/ –1)
Cursor (UP/DOWN)	————	Turing a page (PREVIOUS/NEXT)
Cursor (LEFT/RIGHT)	————	Changing a selected line setting (+10/ –10)
INPUT	————	Input switching (toggle switching)
ENTER	————	Executing a function

*Input mode is switched automatically when relevant adjustment is started so far as the necessary input signal is available.

2) Description of display



5. List of adjustment process mode menu

The character string in brackets [ ] will appear as a page title in the adjustment process menu header.

Page	Line	Item	Description	Remarks (adjustment detail, etc.)
1	1	MAIN Version	Main software version	
	2	BOOT Version		
	3	Monitor/Monitor BOOT Version	Monitor and monitor boot software version	
	4	LCD Con Version	LCD controller software version	Versions are always ‘C000000000’.
	5	EQ DATA CHECKSUM	Audio data checksum	
	6	TEMPERATURE	Panel temperature	
	7	LAMP ERROR	Number of termination due to lamp error	
	8	MONITOR ERR CAUSE		
	9	NORMAL STANDBY CAUSE		Refer to *1 under the list for details
	10	ERROR STANDBY CAUSE		Refer to *2 under the list for details
2	1	INDUSTRY INIT	Initialization to factory settings	
	2	INDUSTRY INIT(-Hotel)		
	3	PUBLIC MODE	Public mode	
	4	Center Acutime	Accumulated main operation time	
	5	RESET	Reset	
	6	Backlight Acutime	Accumulated monitor operation time	
	7	RESET	Reset	
	8	LAMP ERROR RESET	Reset LAMP ERROR	
	9	VIC XPOS	X-coordinate setting for VIC READ	
	10	VIC YPOS	Y-coordinate setting for VIC READ	
	11	VIC COLOR	Collected color data setting for VIC READ	
	12	VIC SIGNAL TYPE	Signal type setting for VIC READ	
	13	VIC READ	Picture level acquisition function	Level appears in green on the upper right
3	1	N358 ALL ADJ(INPUT1)	CVBS and TUNER signal level adjustment	
	2	N358 ALL ADJ(INPUT3)		
	3	N358 MAIN ADJ(INPUT1)	CVBS signal level adjustment	
	4	N358 MAIN ADJ(INPUT3)		
	5	TUNER DAC ADJ	TUNER signal level adjustment	
	6	N358 CONTRAST A_GAIN		
	7	N358 CONTRAST D_GAIN		
	8	N358 CONTRAST OFFSET		
	9	TUNER CONTRAST A_GAIN		
	10	TUNER CONTRAST D_GAIN		
4	1	TUNER VCHIP TEST(69ch)	Tuning test and VCHIP test (69ch)	
	2	TUNER VCHIP TEST(7ch)	Tuning test and VCHIP test (7ch)	
	3	TUNER VCHIP TEST(10ch)	Tuning test and VCHIP test (10ch)	
	4	TUNER VCHIP TEST(15ch)	Tuning test and VCHIP test (15ch)	
	5	INSPECT USB TERM		
	6	HDMI CEC TEST		
5	1	COMP15K ADJ(INPUT1)	Component 15K picture level adjustment (main)	
	2	COMP15K ADJ(INPUT2)		
	3	COMP15K Y A_GAIN		
	4	COMP15K Cb A_GAIN		
	5	COMP15K Cr A_GAIN		
	6	COMP15K Y D_GAIN		
	7	COMP15K Cb D_GAIN		
	8	COMP15K Cr D_GAIN		
	9	COMP15K Y OFFSET		
	10	COMP15K Cb OFFSET		
	11	COMP15K Cr OFFSET		
6	1	COMP33K ADJ(INPUT1)	Component 33K picture level adjustment (main)	
	2	COMP33K ADJ(INPUT2)		
	3	COMP33K Y A_GAIN		
	4	COMP33K Cb A_GAIN		
	5	COMP33K Cr A_GAIN		
	6	COMP33K Y D_GAIN		
	7	COMP33K Cb D_GAIN		
	8	COMP33K Cr D_GAIN		
	9	COMP33K Y OFFSET		
	10	COMP33K Cb OFFSET		
	11	COMP33K Cr OFFSET		

Page	Line	Item	Description	Remarks (adjustment detail, etc.)
7	1	ANALOG RGB ADJ	Analog RGB picture level adjustment	
	2	R A_GAIN		
	3	G A_GAIN		
	4	B A_GAIN		
	5	R D_GAIN		
	6	G D_GAIN		
	7	B D_GAIN		
	8	R OFFSET		
	9	G OFFSET		
	10	B OFFSET		
8	1	VCOM ADJ	VCOM adjustment value	
9	1	FRC ON/OFF		
	2	LEV1	Standard value 1	Adjustment gradation setting.
	3	LEV2	Standard value 2	
	4	LEV3	Standard value 3	
	5	LEV4	Standard value 4	
	6	LEV5	Standard value 5	
	7	LEV6	Standard value 6	
10	1	MG1R	WB adjustment Point 1, R adjustment value	Parameter for six-point adjustment
	2	MG1G	WB adjustment Point 1, G adjustment value	
	3	MG1B	WB adjustment Point 1, B adjustment value	
	4	MG2R	WB adjustment Point 2, R adjustment value	
	5	MG2G	WB adjustment Point 2, G adjustment value	
	6	MG2B	WB adjustment Point 2, B adjustment value	
	7	MG3R	WB adjustment Point 3, R adjustment value	
	8	MG3G	WB adjustment Point 3, G adjustment value	
	9	MG3B	WB adjustment Point 3, B adjustment value	
11	1	MG4R	WB adjustment Point 4, R adjustment value	Parameter for six-point adjustment
	2	MG4G	WB adjustment Point 4, G adjustment value	
	3	MG4B	WB adjustment Point 4, B adjustment value	
	4	MG5R	WB adjustment Point 5, R adjustment value	
	5	MG5G	WB adjustment Point 5, G adjustment value	
	6	MG5B	WB adjustment Point 5, B adjustment value	
	7	MG6R	WB adjustment Point 6, R adjustment value	
	8	MG6G	WB adjustment Point 6, G adjustment value	
	9	MG6B	WB adjustment Point 6, B adjustment value	
12	1	MODE SELECT		
	2	POS SELECT		
	3	POS MIN		
	4	POS MID1		
	5	POS MID2		
	6	POS MID3		
	7	POS MID4		
	8	POS MID5		
	9	POS MID6		
	10	POS MAX		
13	1	CD MIN		
	2	CD MID1		
	3	CD MID2		
	4	CD MID3		
	5	CD MID4		
	6	CD MID5		
	7	CD MID6		
	8	CD MAX		
14	1	CALC		
	2	RESET		
	3	VAL1		
	4	VAL2		
	5	VAL3		
	6	VAL4		
	7	VAL5		
	8	VAL6		

Page	Line	Item	Description	Remarks (adjustment detail, etc.)
15	1	Audio Switch		
	2	Flat Mode		
	3	ADC Volume 1		
	4	ADC Volume 2		
	5	ADC Volume 3		
	6	ADC Volume 4		
	7	ADC Volume 5		
	8	ADC Volume 6		
16	1	Lip Sync LR		
	2	Lip Sync Monitor		
	3	Lip Sync SW		
	4	LR Func Vol AIN(2ch)		
	5	LR Func Vol HDMI(2ch)		
	6	LR Func Vol ATV(2ch)		
	7	LR Func Vol DTV(2ch)		
	8	Input Trim(2ch)		
17	1	PEQ1 F0		
	2	PEQ1 Q		
	3	PEQ1 Gain		
	4	PEQ1 Gain Limit		
	5	PEQ1 Fade Time		
	6	PEQ2 F0		
	7	PEQ2 Q		
	8	PEQ2 Gain		
	9	PEQ2 Gain Limit		
	10	PEQ2 Fade Time		
18	1	PEQ3 F0		
	2	PEQ3 Q		
	3	PEQ3 Gain		
	4	PEQ3 Gain Limit		
	5	PEQ3 Fade Time		
	6	PEQ4 F0		
	7	PEQ4 Q		
	8	PEQ4 Gain		
	9	PEQ4 Gain Limit		
	10	PEQ4 Fade Time		
19	1	PEQ5 F0		
	2	PEQ5 Q		
	3	PEQ5 Gain		
	4	PEQ5 Gain Limit		
	5	PEQ5 Fade Time		
	6	PEQ6 F0		
	7	PEQ6 Q		
	8	PEQ6 Gain		
	9	PEQ6 Gain Limit		
	10	PEQ6 Fade Time		
20	1	PEQ7 F0		
	2	PEQ7 Q		
	3	PEQ7 Gain		
	4	PEQ7 Gain Limit		
	5	PEQ7 Fade Time		
	6	Subsonic Filter		
21	1	Output Trim		
	2	Clipper		
	3	Sub Volume Default		
	4	Sub Volume SH Bass		
	5	Mon Func Vol AIN		
	6	Mon Func Vol HDMI		
	7	Mon Func Vol ATV		
	8	Mon Func Vol DTV		
	9	SW Func Vol AIN		
	10	SW Func Vol HDMI		
	11	SW Func Vol ATV		
	12	SW Func Vol DTV		

Page	Line	Item	Description	Remarks (adjustment detail, etc.)
22	1	BE ATT		
	2	BE G Limit		
	3	Bass Center ATT		
	4	Bass Vol0 MIN		
	5	Bass Vol60 MIN		
	6	Bass Vol60 Center		
	7	Bass Vol0 MAX		
	8	Bass Vol60 MAX		
23	1	Treble Center ATT		
	2	Treble Vol0 MIN		
	3	Treble Vol60 MIN		
	4	Treble Vol60 Center		
	5	Treble Vol0 MAX		
	6	Treble Vol60 MAX		
	7	VS Path		
	8	VS Option		
	9	VS SP Interval		
	10	VS Width		
	11	VS Input Gain(2ch)		
24	1	Bass AGC		
	2	Bass Harmonics		
	3	Bass LPF Fc		
	4	Bass HPF Fc		
	5	Bass AGC Max		
	6	Bass AGC Min		
	7	Bass AGC Attack Time		
	8	Bass AGC Release Time		
	9	Bass AGC Threshold		
	10	Bass AGC HPF F0		
	11	Bass Harmonics Level		
	12	Bass Harmonics LPF F		
	13	Bass Harmonics HPF F		
25	1	PANNEL SELECT		
	2	PWM		
	3	PWM FREQ		
	4	PWM DUTY		
	5	OSC FREQ		
	6	OSC DUTY		
26	1	BRIGHTNESS DA0		
	2	BRIGHTNESS DA1		
	3	BRIGHTNESS DA2		
	4	BRIGHTNESS DA3		
	5	BRIGHTNESS DA4		
	6	BRIGHTNESS DA5		
	7	BRIGHTNESS DA6		
	8	BRIGHTNESS DA7		
	9	BRIGHTNESS DA8		
	10	BRIGHTNESS DA9		
	11	BRIGHTNESS DA10		
	12	BRIGHTNESS DA11		
27	1	BRIGHTNESS DA12		
	2	BRIGHTNESS DA13		
	3	BRIGHTNESS DA14		
	4	BRIGHTNESS DA15		
	5	BRIGHTNESS DA16		
	6	BRIGHTNESS DA17		
	7	BRIGHTNESS DA18		
	8	BRIGHTNESS DA19		
	9	BRIGHTNESS DA20		
	10	BRIGHTNESS DA21		
	11	BRIGHTNESS DA22		

Page	Line	Item	Description	Remarks (adjustment detail, etc.)
28	1	BRIGHTNESS DA23		
	2	BRIGHTNESS DA24		
	3	BRIGHTNESS DA25		
	4	BRIGHTNESS DA26		
	5	BRIGHTNESS DA27		
	6	BRIGHTNESS DA28		
	7	BRIGHTNESS DA29		
	8	BRIGHTNESS DA30		
	9	BRIGHTNESS DA31		
	10	BRIGHTNESS DA32		
29	1	OPC33 ADLEVEL 0		
	2	OPC33 ADLEVEL 1		
	3	OPC33 ADLEVEL 2		
	4	OPC33 ADLEVEL 3		
	5	OPC33 ADLEVEL 4		
	6	OPC33 ADLEVEL 5		
	7	OPC33 ADLEVEL 6		
	8	OPC33 ADLEVEL 7		
	9	OPC33 ADLEVEL 8		
	10	OPC33 ADLEVEL 9		
	11	OPC33 ADLEVEL 10		
	12	OPC33 ADLEVEL 11		
30	1	OPC33 ADLEVEL 12		
	2	OPC33 ADLEVEL 13		
	3	OPC33 ADLEVEL 14		
	4	OPC33 ADLEVEL 15		
	5	OPC33 ADLEVEL 16		
	6	OPC33 ADLEVEL 17		
	7	OPC33 ADLEVEL 18		
	8	OPC33 ADLEVEL 19		
	9	OPC33 ADLEVEL 20		
	10	OPC33 ADLEVEL 21		
	11	OPC33 ADLEVEL 22		
31	1	OPC33 ADLEVEL 23		
	2	OPC33 ADLEVEL 24		
	3	OPC33 ADLEVEL 25		
	4	OPC33 ADLEVEL 26		
	5	OPC33 ADLEVEL 27		
	6	OPC33 ADLEVEL 28		
	7	OPC33 ADLEVEL 29		
	8	OPC33 ADLEVEL 30		
	9	OPC33 ADLEVEL 31		
32	1	V6 OS THERMO 1		
	2	V6 OS THERMO 2		
	3	V6 OS THERMO 3		
	4	V6 OS THERMO 4		
	5	V6 OS THERMO 5		
	6	V6 OS THERMO 6		
	7	V6 OS THERMO 7		
33	1	V5 OS THERMO 1		
	2	V5 OS THERMO 2		
	3	V5 OS THERMO 3		
	4	V5 OS THERMO 4		
	5	V5 OS THERMO 5		
	6	V5 OS THERMO 6		
	7	V5 OS THERMO 7		
34	1	BL TEMP1		
	2	BL TEMP2		
	3	BL TDUTY		
35	1	MONITOR TIME OUT		
	2	MONITOR MAX TEMP		
	3	MONITOR ERROR CAUSE RESET		

Page	Line	Item	Description	Remarks (adjustment detail, etc.)
36	1	LCD TEST PATTERN		
	2	TV TEST PATTERN 1		
	3	TV TEST PATTERN 2		
37	1	KEY LOCK(1217)		
	2	KOUTEI AREA ALL CLEAR		
	3	A MODE AREA CLEAR		
	4	BACKUP AREA CLEAR		
	5	B MODE AREA CLEAR		
	6	EXECUTION		
38	1	READ/WRITE		
	2	SLAVE ADDRESS		
	3	REGISTER ADDRESS UPPER		
	4	REGISTER ADDRESS LOWER		
	5	WRITE DATA UPPER		
	6	WRITE DATA LOWER		
	7	READ DATA UPPER		
	8	READ DATA LOWER		
39	1	EEP SAVE	Writing setting values to EEPROM	
	2	EEP RECOVER	Reading setting values from EEPROM	
	3	STANDBY CAUSE RESET	Reset stand by cause	
	4	SETTING FOR ADJ		
40	1	BD UNIT FACTORY MENU		

***1 Details of P1.9 (NORMAL STANDBY CAUSE)**

2	No operation off	in the cause of “no operation off”
3	No signal off	in the cause of “no signal off”
4	PC power management mode 1	in the cause of “Standby mode MODE1”
5	PC power management mode 2	in the cause of “Standby mode MODE2”
6	Off timer	in the cause of “SLEEP timer”
8	Command from RS232C	in the cause of command by RS-232C

***2 Details of P1.10 (ERROR STANDBY CAUSE)**

11	Prolonged unspecified-signal input in PC mode	in the cause of continuous “out of range”, PC input mode
17	Temperature error	in the cause of abnormal temperature
1A	Monitor trouble detected	in the cause of abnormal monitor mode
22	LCD controller Rom error	in the cause of software abnormality of LCD controller

6. Special features

* STANDBY CAUSE (Page 1/40)

  Display of a cause (code) of the last standby

  The cause of the last standby is recorded in EEPROM whenever possible.

  Checking this code will be useful in finding a problem when you repair the troubled set.

* EEP SAVE (Page 39/40)

  Storage of EEP adjustment value

* EEP RECOVER (Page 39/40)

  Retrieval of EEP adjustment value from storage area

7. Video signal adjustment procedure

*Adjustment process mode menu is listed in section 5.

7.1. Signal check

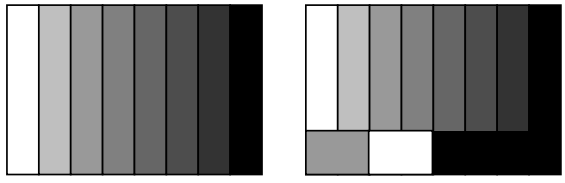
Signal generator level adjustment check (Adjustment to the specified level)

- Composite signal : 0.714Vp-p ± 0.02Vp-p (Pedestal to white level)
- 15K component signal : Y level : 0.714Vp-p ± 0.02Vp-p (Pedestal to white level)
  PB, PR level : 0.7Vp-p ± 0.02Vp-p
- 33K component signal : Y level : 0.7Vp-p ± 0.02Vp-p (Pedestal to white level)
  PB, PR level : 0.7Vp-p ± 0.02Vp-p
- Analog RGB : RGB level : 0.7Vp-p ± 0.02Vp-p (Pedestal to white level)

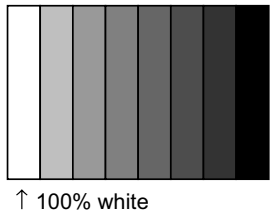
7.2. Entering the adjustment process mode

Enter the adjustment process mode according to the steps described in section 3.

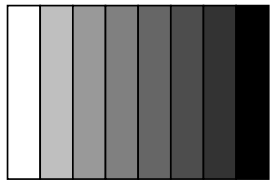
7.3. N358 composite signal adjustment (Tuner)

	Adjustment item	Adjustment conditions	Adjustment procedure
1	Adjustment	N358 signal US-10ch	Feed the NTSC (3.58) split field color bar signal (75% color saturation) to VIDEO 1 input. Feed the RF signal (by use of US-10ch) to TUNER-A. **[Video input signal]** **[US-10CH]**  ↑100% white ↑100% white
2	Auto adjustment performance	Page 3/40	Bring the cursor on [•N358 ALL ADJ (INPUT1)] and press [ENTER]. [•N358 ALL ADJ (INPUT1) OK] appears when finished.

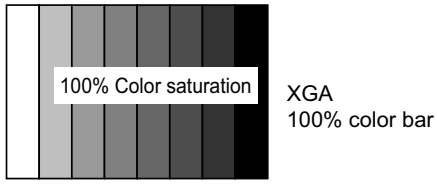
7.4. Component 15K signal adjustment

	Adjustment item	Adjustment conditions	Adjustment procedure
1	Adjustment	480i signal	Feed the 100% color bar signal to INPUT 1 component input.  ↑ 100% white
2	Auto adjustment performance	Page 5/40	Bring the cursor on [•COMP 15K ADJ (INPUT1)] and press [ENTER]. [•COMP 15K ADJ (INPUT1) OK] appears when finished.

7.5. Component 33K signal adjustment

	Adjustment item	Adjustment conditions	Adjustment procedure
1	Adjustment	1080i signal	Feed the 100% color bar signal to INPUT 1 component input.  ↑ 100% white
2	Auto adjustment performance	Page 6/40	Bring the cursor on [•COMP 33K ADJ (INPUT1)] and press [ENTER]. [•COMP 33K ADJ (INPUT1) OK] appears when finished.

7.6. Analog RGB signal adjustment

	Adjustment item	Adjustment conditions	Adjustment procedure
1	Adjustment	Analog RGB signal: XGA (1024 x 768) 60Hz SYNC: HV separate	Feed the XGA 100% color bar signal to ANALOG RGB input. 
2	Auto adjustment performance		Bring the cursor on [•ANALOG RGB ADJ] and press [ENTER]. [•ANALOG RGB ADJ OK] appears when finished.

7.7. Tuner/V-Chip test

	Adjustment item	Adjustment conditions	Adjustment procedure
1	Adjustment	NTSC RF signal US-7 (AIR) ch	Feed the NTSC signal to RF ANTENNA input.
2	Auto adjustment performance		Bring the cursor on [•TUNER VCHIP TEST (*07ch)] and press [ENTER]. (*Select the channel according to the RF signal.) [•A-OK (***.**)/VM-OK] appears in blue when finished. (If [A-NG/VM-NG] appears in yellow or red, the test is incomplete.) Make sure a displacement of ±0.0625 MHz from the center frequency is acceptable.

8. Adjustment of white balance

8.1. White balance adjustment

<table>
<tr><th></th><th>Adjustment item</th><th>Adjustment conditions</th><th>Adjustment procedure</th></tr>
<tr><td>1</td><td>Setting</td><td></td><td>For detailed adjustment procedure, refer to “Kameyama Model Integral Monitor WB Adjustment Specifications V1.6”.
1) Make the following settings for the set.
AV MODE: [DYNAMIC]
Backlight: +16
Active Backlight: OFF
Aging time: Min. 60 minutes
2) Connect the white balance adjustment tool to the set.</td></tr>
<tr><td>2</td><td>Automatic adjust-ment execution</td><td>[Command]
Process mode
KRSW0001
KKT10037

Setting
KYOF0000
OSDS0001
SBSL0016

Multi-point adjustment mode
MSET0001

Point 6
WBI60928
MG6G****
MG6B****
MG6R****

Point 5
WBI50784
MG5G****
MG5B****
MG5R****

Point 4
WBI40580
MG4G****
MG4B****
MG4R****

Point 3
WBI30420
MG3G****
MG3B****
MG3R****

Point 2
WBI20284
MG2G****
MG2B****
MG2R****

Point 1
WBI10184
MG1G****
MG1B****
MG1R****

Writing
MSET0003</td><td>[Adjustment procedure]
1) Using the remote controller, transmit the “monitor adjustment process” code.
2) Set the 6th point to the specified gradation level. With the strongest color being fixed, turn down the R, G and B settings to their reference levels.
3) Set the 5th point to the specified gradation level. Correct the G setting (3136 x 6th-point G setting / 3712) (rounded off), and make the R and B settings to their reference levels.
4) Set the 4th point to the specified gradation level. Correct the G setting (2320 x 6th-point G setting / 3712) (rounded off), and make the R and B settings to their reference levels.
5) Set the 3rd point to the specified gradation level. Correct the G setting (1680 x 6th-point G setting / 3712) (rounded off), and make the R and B settings to their reference levels.
6) Set the 2nd point to the specified gradation level. Correct the G setting (1136x 6th-point G setting / 3712) (rounded off), and make the R and B settings to their reference levels.
7) Set the 1st point to the specified gradation level. Correct the G setting (736 x 6th-point G setting / 3712) (rounded off), and make the R and B settings to their reference levels.
8) With the MSET0003 command, write the adjustment values and turn off the AC power.
* Initial R, G and B settings at point 6: Gradation level set at 3712
* Initial R, G and B settings at points 1 thru 5: Corrected G setting at each point
(This is because the adjustment is made to achieve the same remainder of RGB setting / 4 at each point.)
[Adjustment value]
•As per the “standard set” submitted by Engineering Department Teaching set
[Adjustment reference] Instrument: Minolta CA-210 Engineering instrument

<table>
<tr><th></th><th>Level</th><th>Reference</th><th>Adj. spec</th><th>Ins. spec</th></tr>
<tr><td>Point 6</td><td>928</td><td>X=0.272
y=0.277</td><td>±0.0010</td><td>±0.0020</td></tr>
<tr><td>Point 5</td><td>784</td><td>X=0.272
y=0.277</td><td>±0.0010</td><td>±0.0020</td></tr>
<tr><td>Point 4</td><td>580</td><td>X=0.272
y=0.277</td><td>±0.0015</td><td>±0.0030</td></tr>
<tr><td>Point 3</td><td>420</td><td>X=0.272
y=0.277</td><td>±0.0020</td><td>±0.0040</td></tr>
<tr><td>Point 2</td><td>284</td><td>X=0.272
y=0.277</td><td>±0.0030</td><td>±0.0060</td></tr>
<tr><td>Point 1</td><td>184</td><td>X=0.272
y=0.277</td><td>±0.0040</td><td>±0.0080</td></tr>
<tr><td>Note</td><td></td><td colspan="3">Set conditions for inspection
AV MODE: [DYNAMIC] (Reset)
Monochro: ON
Active Contrast: OFF
Aging Time: Min. 60 minutes</td></tr>
</table>
</td></tr>
</table>

8.2. Adjusting procedure by use of [RS-232C]

1. Get ready the PC with COM port (RS-232C) running on Windows 95/98/ME/2000/XP operating system, as well as the RS-232C cross cable.
2. Start the unit with the RS-232C cable connected.
3. Start the terminal software. (The freeware readily available on the Internet will do.)
4. Make the following settings.

Baud rate	9,600 bps
Data LENGTH	8 bit
Parity bit	None
Stop bit	1 bit
Flow control	None

5. If the settings are correct, the terminal software indicates “ERR” against pressing of the “ENTER” key.
6. After the settings are done correctly, it is possible to make an adjustment by typing in the command shown in the table below and pressing the “ENTER” key on the keyboard.
7. Command entry is successful if the terminal software indicates “OK” when the “ENTER” is pressed. If “ERR” is shown, retry to enter the command.
8. Send the process mode switching command to switch from the RS232C operation mode to the process mode.

   KRSW0001: “ERR” is returned.

   KKT10037: When “OK” is returned, the process mode becomes active. When “ERR”, start over from KRSW0001.
9. Send each adjustment command.

9. Initialization to factory settings

CAUTION: When initialization is performed, all user setting data including the channel settings are initialized. Be cautious when making this adjustment.

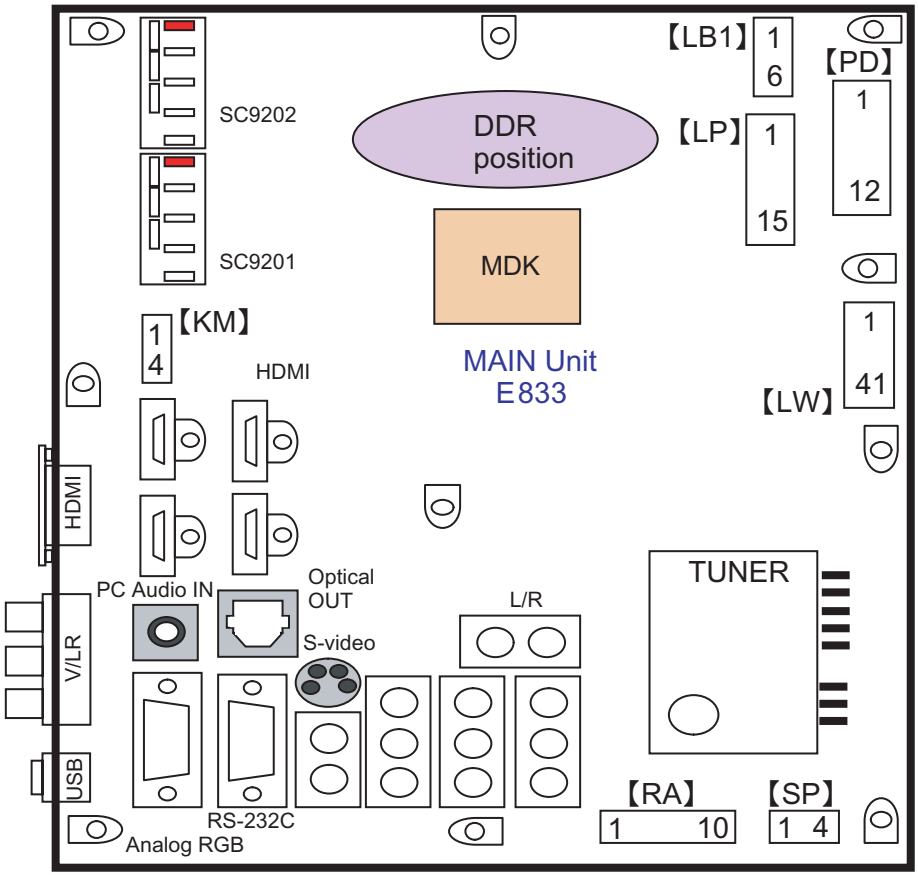
(The adjustments done in the adjustment process mode are not initialized.)

	Adjustment item	Adjustment conditions	Adjustment procedure
1	Initialization	It turns off with AC power supply.	Enter the adjustment process mode. Bring the cursor on to [INDUSTRY INIT] in page 2/40. Set to [ON] using [VOL] key, and press [ENTER] to execute the initialization. When the version number screen shows up on the green background and “SUCCESS” gets displayed at the top on screen, it means the procedure has been successfully carried out. (If an error occurs, “ERROR” is displayed on the red background.) •Turn off the AC power. *Never shut off the power during the initialization process. The following settings are initialized in this adjustment.
			1) User setting 2) Channel data (e.g. broadcast frequencies) 3) Password data 4) Operation time 5) Auto installation flag 6) V-CHIP block setting

After the adjustment, cancel the adjustment process mode.
To exit the adjustment process mode, unplug the AC power cable from the outlet to make a forced shutdown. (When the power was turned off with the remote controller, once unplug the power cable and plug it again. In this case, wait 10 seconds or so before plugging.)

10. Model number ID plug

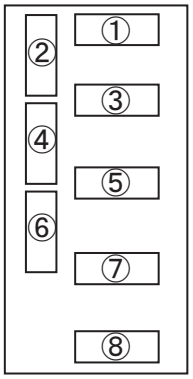
Model numbers are identified by inserting the destination ID plug (QCNCMA275WJQZ) in its specified slot of the destination ID connector SC9201/ SC9202 (QCNCWA715WJQZY).



Destination ID connector locations

	SC9201	SC9202
LC-46E77U	③	⑤
LC-52E77U	⑤	⑤

Plug locations



[2] PUBLIC MODE SETTING PROCEDURE

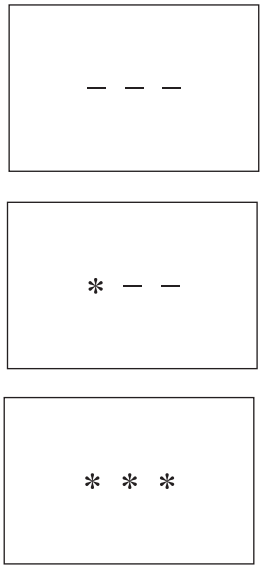
1. How to start Public Mode

• There are the following two ways to get the public mode setup screen displayed.

① In the adjustment process mode, turn on “PUBLIC MODE”. Also press the “CH (^)” and “VOL (+)” keys on the set at once and turn on the power.

② 1) Press the “INPUT” and “VOL (+)” keys on the set at once and turn on the power.

2) Get the password input screen displayed.



Procedure

- The input starts with the leftmost digit.
- Use the numeric keys [1] thru [9] and [0] keys on the remote controller. The other keys are not acceptable.
- With a numeric-key input, "–" will change to "✻". The input position will move one digit to the right.
- With all the 3 digits entered, the password will be verified.

3) The 3-digit password is now verified.

The password [0] [2] [7] provides for the public mode screen. (This screen comes on with whatever adjustment process settings.)

With any other passwords, the screen changes to the normal mode.

2. How to exit Public Mode

There are the following ways to quit the public mode setup screen.

• Turn off “PUBLIC MODE” in the adjustment process mode. (☆) ← This way alone is not for quitting the setup screen, but for quitting the mode itself.

• Turn off the power with the “POWER” key. (★)

• Select “EXECUTE”. (★)

★... “PUBLIC MODE” stays on in the adjustment process mode.

☆... The settings will be back to the factory ones.

3. Public Mode Setting Values

• With the factory settings made, the public mode settings get initialized. (The adjustment process remains intact.)

4. Public Mode Menu

The guidance is not displayed on screen.

Setup procedure

- To move the cursor up and down, use the “cursor UP/DOWN” key (remote controller) and “CH (∧)/(∨)” key (remote controller and set).
- To change the settings, use the “cursor RIGHT/LEFT” key (remote controller) and “VOL (+)/(–)” key (remote controller and set).
- To save new settings, keep the cursor at “EXECUTE” and use “ENTER” key (remote controller and set).

PUBLIC MODE	
POWER ON FIXED	[VARIABLE]
MAXIMUM VOLUME	[60]
VOLUME FIXED	[VARIABLE]
VOLUME FIXED LEVEL	[20]
RC BUTTON	[RESPOND]
PANEL BUTTON	[RESPOND]
MENU BUTTON	[RESPOND]
AV POSITION FIXED	[VARIABLE]
ON SCREEN DISPLAY	[YES]
INPUT MODE START	[NORMAL]
INPUT MODE FIXED	[VARIABLE]
LOUD SPEAKER	[ON]
RC_PATH_THROUGH	[OFF]
232C POWON	[DISABLE]
PUBLIC MODE	[OFF]
RESET	
EXECUTE	

5. On Setting Items

* “EZ-SETUP” discussed below indicates “EZ-SETUP after the first power-on”.

1) POWER ON FIXED

Selection	Selection between “Variable” and “Fixed” (loop provided)
Default	– (Variable)
Explanation	In “Fixed” setting, the power-off by the power key of the unit is invalidated and the image is kept being received. The power can be turned off by stopping the power supply from AC.
Limit in Setting	Refer to the “Power-On Fixed” sheet.
Exception	None
Remarks	• In “Variable” setting, the power operation is in wait for 1 sec. and then turned off when the main power switch is off.

2) MAXIMUM VOLUME

Selection	Adjustment from 0 to 60 (no loop)
Default	60
Explanation	Sound volume can not be adjusted higher than the preset value.
Limit in Setting	• When the sound volume is set lower than 59, only figures are displayed and the sound volume bar is not displayed. • The maximum sound volume for ON-timer (Wake up timer) is limited also to the preset value.
Exception	
Remarks	• When the sound volume is set higher than the MAX setting by the adjusting process, the sound volume control operation is prohibited for turn-up and the sound volume should be turned down to MAX in this state.

3) VOLUME FIXED

Selection	Selection between “Variable”, “Fixed”, “ACON (AC CTRL)” and “AC/RCON (AC/RC CTRL)” (loop provided)
Default	Variable
Explanation	• FIXED: Fixed at the level adjusted for a fixed volume. • AC CTRL: Start-up at the level specified for a fixed volume at ACON. • AC/RC CTRL: Start-up at the level specified for a fixed volume at start.

Limit in Setting	• The sound volume for the ON-timer (Wake up timer) is fixed also without display of menu. Besides, the setting is made impossible. (Basically, the menu is not displayed.)
	• The following keys become invalid:
	  • Sound volume Up/Down (VOL +/–) [for both remote control and the unit]
	  • Mute (MUTE)

Exception	• In the item “VOLUME” of adjustment process, the sound volume can be set freely irrespective of this setting.
Remarks	• As for sound volume fixing and sound volume MAX level, the sound volume fixing has priority. • Once the sound volume has been changed by adjustment process, it should be set back to the sound volume preset by sound volume fixing level when the adjustment process ends.

4) VOLUME FIXED LEVEL

Selection	Adjustment from 1 to 60 (no loop)
Default	20
Explanation	The sound volume to be fixed by “Volume fixed” is determined.
Limit in Setting	None
Exception	None
Remarks	Setting is valid only when “Volume fixed” is selected for “fixed”.

5) R/C BUTTON

Selection	Selection between “Respond”, “No Respond” and “Limited” (loop provided)
Default	Respond
Explanation	Making the remote controller settings. • At the “No Respond” setting, the remote controller keys are disabled. Its power key (reception/standby key) is disabled too. • At the “Limited” setting, some channel-related keys alone are operative. All the other remote controller keys (power, volume ▲/▼, channel ▲/▼, light control (brightness sensor), broadcast select) are inoperative.
Limit in Setting	① In “No respond” setting, all the keys (including the power key) are not accepted.
Exception	• Adjustment process, inspection process and hotel only keys are valid irrespective of setting. • All the keys can be used in adjustment process, inspection mode and hotel menu irrespective of setting.
Remarks	

6) PANEL BUTTON

Selection	Selection between “Respond” and “No respond” (loop provided)
Default	Respond
Explanation	All the operations by keys (except the power key) of the unit can be invalidated.
Limit in Setting	
Exception	• Adjustment process, inspection mode and hotel menu mode can be started irrespective of setting. • All the keys can be used in adjustment process, inspection mode and hotel menu irrespective of setting.
Remarks	

7) MENU BUTTON

Selection	Selection between “Respond” and “No respond” (loop provided)
Default	Respond
Explanation	In “No respond” setting, the menu operation by the menu key of the remote control and the menu key of the unit are invalidated.
Limit in Setting	
Exception	• Adjustment process, inspection mode and hotel menu mode can be started irrespective of setting. • All the keys can be used in adjustment process, inspection mode and hotel menu irrespective of setting.
Remarks	

8) ON SCREEN DISPLAY

Selection	Selection between “Yes”, “No” (loop provided)
Default	Yes
Explanation	• At the “No” setting, the following items are not displayed on screen: register, setting, adjustment menu, channel call and volume bar. On the wide-screen models, an input selection is immediately made because the menu is not displayed. • At the “Limited” setting, some items cannot be displayed on screen. On the Japan-destined models, the channel call “Message” alone cannot be displayed. (This is because the channel call message may be confused with a message being sent from the hotel.) On the North America-destined models, the OSD works the same as at the “No” setting.
Limit in Setting	• Keys falling under any of the following items become invalid. ① Appearance of screen changes and the sound changes. ② Personal functions which are hard to restore. Screen display, menu, OFF-timer, ON-timer, AV MODE, screen size switching, clock setting, treble emphasis, AUDIO ONLY, sound changeover, LANGUAGE, CLOSED CAPTION
Others	• Simple input switching is generated. Those which are restored soon after leaving as they are and may be requested for change by customer are not prohibited. Brightness sensor (BACKLIGHT) and PIC. FLIP
Exception	• Such a caution which is displayed independently is displayed as it is. Non-responding signal caution
Remarks	• When CC has already been ON, CLOSED CAPTION is displayed.

9) INPUT MODE START

Selection	Selection between “Normal”, “Air (✻)”, “INPUT 1/2/3”, “PC”, “HDMI 1/2/3/4/5”, “DVI” (loop provided)
Default	Normal
Explanation	In power-ON, the input source to be started or channel can be set. (In standard mode, the operation follows the last memory.)
About options	• All the input sources in the model are made selectable. • In TV mode, the channel to be set follows the last memory and the content of the last memory is included in the notation by options. Ex.) Air (2), Cable (98.1) etc.
Limit in Setting	• The display of channel setting menu and the channel setting operation are prohibited.
Exception	
Remarks	• In setting at “Normal”, the setting of “Input mode fixed” is changed to “Variable” and selection should be prohibited.

10)INPUT MODE FIXED

Selection	Selection between “Variable”, “Fixed”, “ACON (AC CTRL)” and “AC/RCON (AC/RC CTRL)” (loop provided)
Default	– (Variable)
Explanation	• At the “Fixed” setting, the TV set gets started with the settings of “Input mode start”, and then any other channels and inputs are not accepted. • At the “ACON (AC CTRL)” setting, the TV set gets started with the settings of “Input mode start” under AC control. • At the “AC/RCON (AC/RC CTRL)” setting, the TV set gets started with the settings of “Input mode start” under either control.
Limit in Setting	• With the execution of hotel mode, the input source is forced to change to that set by “Input mode start” and the channel switching and input switching are prohibited thereafter. • ON-timer's (Wake-up timer) channel items are not displayed or the operation is prohibited. (Basically, they are not displayed.) • The following keys are invalidated. CH ▲ / ▼, direct tuning button, FLASHBACK, input ✻However, the keys (input switching and CH ▲ / ▼ keys) of the unit for menu operation remain valid.
Exception	None
Remarks	• In the following case, setting is cancelled and mode is changed to “Variable”. ① When the setting of “Input mode start” is set to “Normal”.

11)RC_PATH_THROUGH

Selection	Selection between “OFF”, “ON: TV RCE” and “ON: TV RCD” (loop provided)
Default	OFF
Explanation	Function to feed the remote controller-received signal to Pin 9 (open) on the RS232C.
Limit in Setting	None
Exception	None
Remarks	None

12)AV POSITION FIXED

Selection	Selection between “Variable” and “Fixed” (loop provided)
Default	Variable
Explanation	In case of “Fixed” setting, – Menu “Picture” and “Audio” setting can't be changed like “Dynamic (Fixed)”. – When “AV Mode” key is pressed, TV just displays current AV Mode (cannot be changed.).
Limit in Setting	None
Exception	None
Remarks	• When receiving with AV Position key, OPC, Dolby key and other direct audio select keys, the current display stays on and no setting can be changed. • Even by initializing personal information, the hotel-mode settings are kept intact. In this way, the AV positions, video and audio adjustment settings are not initialized.

13)LOUD SPEAKER (ON/OFF)

Selection	Selection between “ON” and “OFF” (loop provided)
Default	ON
Explanation	If “OFF” is selected, TV stops Speaker output even without Headphone connected.
Limit in Setting	None
Exception	None
Remarks	• Press the volume UP/DOWN key, and the mute icon appears for 4 seconds. • The mute key and audio-related keys are displayed with caution. • Usually, the headphones and monitor audio outputs can be adjustable.

14)232C POWON

Selection	Selection between “Disable” and “Enable” (loop provided)
Default	Disable
Explanation	In the standby mode, the power-on by the 232C command is enabled or disabled.
Limit in Setting	None
Exception	None
Remarks	None

15)PUBLIC MODE (ON/OFF)

Selection	Selection between “ON” and “OFF” (loop provided)
Default	OFF
Explanation	In case of “ON”, public mode settings are effected.
Limit in Setting	None
Exception	None
Remarks	The public-mode settings are operable only when this item is set at ON.

CHAPTER 6. TROUBLESHOOTING TABLE

[1] TROUBLESHOOTING TABLE

No video (1)

COMPOSITE: No external input video [INPUT-1]

Is INPUT-1 selected on the input select menu screen?

NO

Select INPUT-1 on the input select menu screen for the right input signal.

Does the INPUT-1 V1_PLUG detection function?

Check the line between pin (2) of input terminal (J507) and pin (AJ1) of IC8001 (CPU).

YES

Is there the COMPOSITE signal input at pin (AE28) of IC8001 (CPU)?

NO

Check the line between pin (3) of J507 and pin (AE28) of IC8001.

YES

COMPOSITE: No external input video [INPUT-3]

Is INPUT-3 selected on the input select menu screen?

NO

Select INPUT-3 on the input select menu screen for the right input signal.

Does the INPUT-3 V3_PLUG detection function?

Check the line between pin (7) of input terminal (J501) and pin (AJ2) of IC8001 (CPU).

YES

Is there the COMPOSITE signal input at pin (AE29) of IC8001 (CPU)?

NO

Check the line between pin (6) of J501 and pin (AE29) of IC8001.

YES

Are the LVDS signal outputs at the LVDS 1st channel and 2nd channel of IC8001?
LVDS_TX_0_DATA0_P/N (C14/D14), LVDS_TX_0_DATA1_P/N (C15/D15),
LVDS_TX_0_DATA2_P/N (C16/D16), LVDS_TX_0_DATA3_P/N (C18/D18),
LVDS_TX_0_DATA4_P/N (C19/D19), LVDS_TX_0_CLK_P/N (C17/D17),
LVDS_TX_1_DATA0_P/N (A14/B14), LVDS_TX_1_DATA1_P/N (A15/B15),
LVDS_TX_1_DATA2_P/N (A16/B16), LVDS_TX_1_DATA3_P/N (A18/B18),
LVDS_TX_1_DATA4_P/N (A19/B19), LVDS_TX_1_CLK_P/N (A17/B17).

NO → Check IC8001 and its peripheral circuits. (IC8152/IC8153, etc.)

YES

Check the panel module.

No video (2)

COMPONENT: No external input video [INPUT-1]

Is INPUT-1 selected on the input select menu screen?
Is the INPUT-SELECT for the input signal?

NO

Select INPUT-1 on the input select menu screen for the right input signal.

Does the INPUT-1 C1_PLUG detection function?

Check the line between pin (2) of input terminal (J508) and pin (AF7) of IC8001 (CPU).

YES

Are there the COMPONENT video signal inputs at pins (AJ21) (Y)/(AJ22) (Pb) and (AH22) (Pr) of IC8001 (CPU)?

NO

Check the line between the input terminals of J508 and IC8001.

①J508 pin (3) (Y) pin (5) (Pb) pin (7) (Pr)

②IC8001 pin (AJ21) pin (AJ22) pin (AH22)

YES

Are the LVDS signal outputs at the LVDS 1st channel and 2nd channel of IC8001?
LVDS_TX_0_DATA0_P/N (C14/D14), LVDS_TX_0_DATA1_P/N (C15/D15), LVDS_TX_0_DATA2_P/N (C16/D16), LVDS_TX_0_DATA3_P/N (C18/D18), LVDS_TX_0_DATA4_P/N (C19/D19), LVDS_TX_0_CLK_P/N (C17/D17), LVDS_TX_1_DATA0_P/N (A14/B14), LVDS_TX_1_DATA1_P/N (A15/B15), LVDS_TX_1_DATA2_P/N (A16/B16), LVDS_TX_1_DATA3_P/N (A18/B18), LVDS_TX_1_DATA4_P/N (A19/B19), LVDS_TX_1_CLK_P/N (A17/B17).

YES

Check the panel module.

COMPONENT: No external input video [INPUT-2]

Is INPUT-2 selected on the input select menu screen?
Is the INPUT-SELECT for the input signal?

NO

Select INPUT-2 on the input select menu screen for the right input signal.

Does the INPUT-2 C2_PLUG detection function?

Check the line between pin (2) of input terminal (J502) and pin (AH2) of IC8001 (CPU).

YES

Are there the COMPONENT video signal inputs at pins (AJ18) (Y)/(AJ19) (Pb) and (AH19) (Pr) of IC8001 (CPU)?

NO

Check the line between the input terminals of J502 and IC8001.

①J508 pin (3) (Y) pin (5) (Pb) pin (7) (Pr)

②IC8001 pin (AJ18) pin (AJ19) pin (AH19)

YES

NO

Check IC8001 and its peripheral circuits.
(IC8152/IC8153, etc.)

No video (3)

↓

S-VIDEO: No external input video [INPUT-2]

↓

Is INPUT-2 selected on the input select menu screen?

↓ NO

Does the INPUT-2 S1_PLUG detection function?

Check the line between pin (6) of input terminal (J504) and pin (AH1) of IC8001 (CPU).

↓ YES

Are there the S-VIDEO signal inputs at pins (AF30) (Y) and (AF29) (C) of IC8001 (CPU)?

↓ NO

Check the line between pins (3) (Y)/(4) (C) of J504 and pins (AF30)/(AF29) of IC8001. (Q519 and Q520, etc.)

↓ YES

Are the LVDS signal outputs at the LVDS 1st channel and 2nd channel of IC8001?
LVDS_TX_0_DATA0_P/N (C14/D14), LVDS_TX_0_DATA1_P/N (C15/D15), LVDS_TX_0_DATA2_P/N (C16/D16), LVDS_TX_0_DATA3_P/N (C18/D18), LVDS_TX_0_DATA4_P/N (C19/D19), LVDS_TX_0_CLK_P/N (C17/D17), LVDS_TX_1_DATA0_P/N (A14/B14), LVDS_TX_1_DATA1_P/N (A15/B15), LVDS_TX_1_DATA2_P/N (A16/B16), LVDS_TX_1_DATA3_P/N (A18/B18), LVDS_TX_1_DATA4_P/N (A19/B19), LVDS_TX_1_CLK_P/N (A17/B17).

NO → Check IC8001 and its peripheral circuits. (IC8152/IC8153, etc.)

↓ YES

Check the panel module.

No video (4)

No video at UHF/VHF broadcast signal reception

Is the specified TV signal selected on the input select menu screen?

Is there the analog video signal output (VIDEO) at pin (19) of tuner (TU1101)?

NO

Check TU1101 and its peripheral circuits
(TUN_SDA: Pin8 of TU1101
TUN_SCL: Pin9 of TU1101, etc.).

YES

Is there the analog video signal input at pin (AD29) of IC8001 (CPU)?

NO

Check the line between IC8001 and TU1101, and their peripheral circuits.

YES

Are the LVDS signal outputs at the LVDS 1st channel and 2nd channel of IC8001?
LVDS_TX_0_DATA0_P/N (C14/D14), LVDS_TX_0_DATA1_P/N (C15/D15),
LVDS_TX_0_DATA2_P/N (C16/D16), LVDS_TX_0_DATA3_P/N (C18/D18),
LVDS_TX_0_DATA4_P/N (C19/D19), LVDS_TX_0_CLK_P/N (C17/D17),
LVDS_TX_1_DATA0_P/N (A14/B14), LVDS_TX_1_DATA1_P/N (A15/B15),
LVDS_TX_1_DATA2_P/N (A16/B16), LVDS_TX_1_DATA3_P/N (A18/B18),
LVDS_TX_1_DATA4_P/N (A19/B19), LVDS_TX_1_CLK_P/N (A17/B17).

NO →

Check IC8001 and its peripheral circuits.
(IC8152/IC8153, etc.)

YES

Check the panel module.

No video at digital broadcast signal reception

Are there the video signal outputs (IF_P/N) at the pins (12) and (13) of tuner (TU1101)?

NO

Check TU1101 and its peripheral circuits
(TUN_SDA: Pin8 of TU1101
TUN_SCL: Pin9 of TU1101, etc.).

YES

Are there the video signal inputs at pin (AA29) and (AB29) of IC8001 (CPU)?

NO

Check the line between IC8001 and TU1101, and their peripheral circuits (C1129/C1130, etc.).

YES

No video (5)

↓

PC: No external input video [INPUT-4]

↓

Is INPUT-4 selected on the input select menu screen?

↓ NO

Select INPUT-4 on the input select menu screen for the right input signal.

↓

Is IC1809 (EEPROM) accessed by I2C, with PC connected, to read the DDC_I2C SCL/SDA data?

Check the DDC line and its peripheral circuits. (IC1809 and its peripherals).

↓ YES

Are there the video signal inputs at pins (AK16) (G), (AH15) (B) and (AK17) (R) of IC8001 (CPU)?
Are there the VSYNC/HSYNC signal inputs at pins (AJ14) and (AK14) of IC8001?

↓ NO

Check the line between SC1804 and IC8001 (IC1802, etc.).

↓ YES

Are the LVDS signal outputs at the LVDS 1st channel and 2nd channel of IC8001?
LVDS_TX_0_DATA0_P/N (C14/D14), LVDS_TX_0_DATA1_P/N (C15/D15),
LVDS_TX_0_DATA2_P/N (C16/D16), LVDS_TX_0_DATA3_P/N (C18/D18),
LVDS_TX_0_DATA4_P/N (C19/D19), LVDS_TX_0_CLK_P/N (C17/D17),
LVDS_TX_1_DATA0_P/N (A14/B14), LVDS_TX_1_DATA1_P/N (A15/B15),
LVDS_TX_1_DATA2_P/N (A16/B16), LVDS_TX_1_DATA3_P/N (A18/B18),
LVDS_TX_1_DATA4_P/N (A19/B19), LVDS_TX_1_CLK_P/N (A17/B17).

↓ NO

Check IC8001 and its peripheral circuits. (IC8152/IC8153, etc.)

↓ YES

Check the panel module.

<HDMI input> No video (6)-1

HDMI: No external input video [INPUT-5]

Is INPUT-5 selected on the input select menu screen?

NO → Select INPUT-5 on the input select menu screen for the right input signal.

YES

Does the HOT PLUG detection function?
Does the DDC5V signal come from pin (18) of SC1601 to pin (36) of IC1605 (HDMI_SW1)?

NO → Check the line between the input terminals of SC1601 and IC1605.
Check IC1605 and its peripheral circuits (SDA1: pin53 of IC1605/SCL1: pin54 of IC1605, etc.).

YES

Does the HPD signal come from pin (35) of IC1605 to pin (19) of SC1601?

NO → Check the line between the pin (35) of IC1605 and the pin (19) of SC1601.
Check IC1605 and its peripheral circuits (SDA1: pin53 of IC1605/SCL1:pin54 of IC1605, etc.).

YES

Are there the TMDS signal inputs at pins (1/2) (CLK-/+), (3/4) (D0-/+), (5/6) (D1-/+), (7/8) (D2-/+), all of IC1605?

NO → Is IC1605 (pin33/pin34) accessed by I2C, with HDMI connected, to read the DDC_I2C SDA/SCL data?

NO → Check the DDC line and its peripheral circuits. (IC1605 and its peripherals).

YES

Are there the TMDS signal inputs at pins (AJ6/AK6) (CLK-/+), (AJ7/AK7) (D0-/+), (AJ8/AK8) (D1-/+), (AJ9/AK9) (D2-/+), all of IC8001 (CPU)?

NO → Check IC1605, IC8001 and their peripheral circuits.

YES

Are the LVDS signal outputs at the LVDS 1st channel and 2nd channel of IC8001?
LVDS_TX_0_DATA0_P/N (C14/D14), LVDS_TX_0_DATA1_P/N (C15/D15), LVDS_TX_0_DATA2_P/N (C16/D16), LVDS_TX_0_DATA3_P/N (C18/D18), LVDS_TX_0_DATA4_P/N (C19/D19), LVDS_TX_0_CLK_P/N (C17/D17), LVDS_TX_1_DATA0_P/N (A14/B14), LVDS_TX_1_DATA1_P/N (A15/B15), LVDS_TX_1_DATA2_P/N (A16/B16), LVDS_TX_1_DATA3_P/N (A18/B18), LVDS_TX_1_DATA4_P/N (A19/B19), LVDS_TX_1_CLK_P/N (A17/B17).

NO → Check IC8001 and its peripheral circuits. (IC8152/IC8153, etc.)

YES

Check the panel module.

HDMI: No external input video [INPUT-7]

Is INPUT-7 selected on the input select menu screen?

NO → Select INPUT-7 on the input select menu screen for the right input signal.

YES

Does the HOT PLUG detection function?
Does the DDC5V signal come from pin (18) of SC1602 to pin (42) of IC1605 (HDMI_SW1)?

NO → Check the line between the input terminals of SC1601 and IC1605.
Check IC1605 and its peripheral circuits (SDA1: pin53 of IC1605/SCL1: pin54 of IC1605, etc.).

YES

Does the HPD signal come from pin (41) of IC1605 to pin (19) of SC1602?

NO → Check the line between the pin (41) of IC1605 and the pin (19) of SC1601.
Check IC1605 and its peripheral circuits (SDA1: pin53 of IC1605/SCL1: pin54 of IC1605, etc.).

YES

Are there the TMDS signal inputs at pins (11/12) (CLK-/+), (13/14) (D0-/+), (15/16) (D1-/+), (17/18) (D2-/+), all of IC1605?

NO → Is IC1605 (pin39/pin40) accessed by I2C, with HDMI connected, to read the DDC_I2C SDA/SCL data?

NO → Check the DDC line and its peripheral circuits. (IC1605 and its peripherals).

YES

<HDMI input> No video (6)-2

HDMI: No external input video [INPUT-6]

Is INPUT-6 selected on the input select menu screen?

NO → Select INPUT-6 on the input select menu screen for the right input signal.

YES

Does the HOT PLUG detection function?
Does the DDC5V signal come from pin (18) of SC1801 to pin (32) of IC1801 (HDMI_SW2)?

NO → Check the line between the input terminals of SC1801 and IC1801.
Check IC1801 and its peripheral circuits (SDA1: pin53 of IC1801/SCL1: pin54 of IC1801, etc.).

YES

Does the HPD signal come from pin (31) of IC1801 to pin (19) of SC1801?

NO → Check the line between the pin (31) of IC1801 and the pin (19) of SC1801.
Check IC1801 and its peripheral circuits (SDA1: pin53 of IC1801/SCL1: pin54 of IC1801, etc.).

YES

Are there the TMDS signal inputs at pins (65/66) (CLK-/+), (67/68) (D0-/+), (69/70) (D1-/+), (71/72) (D2-/+), all of IC1801?

NO → Is IC1801 (pin29/pin30) accessed by I2C, with HDMI connected, to read the DDC_I2C SDA/SCL data?

NO → Check the DDC line and its peripheral circuits. (IC1801 and its peripherals).

YES

Are there the TMDS signal inputs at pins (19/20) (CLK-/+), (21/22) (D0-/+), (23/24) (D1-/+), (25/26) (D2-/+), all of IC1605 (HDMI_SW1)?

NO → Check IC1801, IC1605 and their peripheral circuits.

YES

Are the LVDS signal outputs at the LVDS 1st channel and 2nd channel of IC8001?
LVDS_TX_0_DATA0_P/N (C14/D14), LVDS_TX_0_DATA1_P/N (C15/D15), LVDS_TX_0_DATA2_P/N (C16/D16), LVDS_TX_0_DATA3_P/N (C18/D18), LVDS_TX_0_DATA4_P/N (C19/D19), LVDS_TX_0_CLK_P/N (C17/D17), LVDS_TX_1_DATA0_P/N (A14/B14), LVDS_TX_1_DATA1_P/N (A15/B15), LVDS_TX_1_DATA2_P/N (A16/B16), LVDS_TX_1_DATA3_P/N (A18/B18), LVDS_TX_1_DATA4_P/N (A19/B19), LVDS_TX_1_CLK_P/N (A17/B17).

NO → Check IC8001 and its peripheral circuits. (IC8152/IC8153, etc.)

YES

Check the panel module.

HDMI: No external input video [INPUT-8]

Is INPUT-8 selected on the input select menu screen?

NO → Select INPUT-8 on the input select menu screen for the right input signal.

YES

Does the HOT PLUG detection function?
Does the DDC5V signal come from pin (18) of SC1802 to pin (42) of IC1801 (HDMI_SW2)?

NO → Check the line between the input terminals of SC1802 and IC1801.
Check IC1801 and its peripheral circuits (SDA1: pin53 of IC1801/SCL1: pin54 of IC1801, etc.).

YES

Does the HPD signal come from pin (41) of IC1801 to pin (19) of SC1802?

NO → Check the line between the pin (41) of IC1801 and the pin (19) of SC1802.
Check IC1801 and its peripheral circuits (SDA1: pin53 of IC1801/SCL1: pin54 of IC1801, etc.).

YES

Are there the TMDS signal inputs at pins (11/12) (CLK-/+), (13/14) (D0-/+), (15/16) (D1-/+), (17/18) (D2-/+), all of IC1801?

NO → Is IC1801 (pin39/pin40) accessed by I2C, with HDMI connected, to read the DDC_I2C SDA/SCL data?

NO → Check the DDC line and its peripheral circuits. (IC1801 and its peripherals)

YES

YES

<HDMI input> No video (6)-3

HDMI:No external input video [INPUT-9]

Is INPUT-9 selected on the input select menu screen?

NO

Select INPUT-9 on the input select menu screen for the right input signal.

YES

Does the HOT PLUG detection function?

Does the DDC5V signal come from pin(18) of SC1803 to pin(46) of IC1801(HDMI_SW2)?

NO

Check the line between the input terminals of SC1803 and IC1801.

Check IC1801 and its peripheral circuits (SDA1:pin53 of IC1801/SCL1:pin54 of IC1801, etc.).

YES

Does the HPD signal come from pin(45) of IC1801 to pin(19) of SC1801?

NO

Check the line between the pin(45) of IC1801 and the pin(19) of SC1801.

Check IC1801 and its peripheral circuits (SDA1:pin53 of IC1801/SCL1:pin54 of IC1801, etc.).

YES

Are there the TMDS signal inputs at pins(19/20)(CLK-/+), (21/22)(D0-/+), (23/24)(D1-/+), (25/26)(D2-/+), all of IC1801?

NO

Is IC1801(pin43/pin44) accessed by I2C, with HDMI connected, to read the DDC_I2C SCL/SDA data?

NO

Check the DDC line and its peripheral circuits. (IC1801 and its peripherals).

YES

Are there the TMDS signal inputs at pins(19/20)(CLK-/+), (21/22)(D0-/+), (23/24)(D1-/+), (25/26)(D2-/+), all of IC1605(HDMI_SW1)?

NO → Check IC1801, IC1605 and their peripheral circuits.

YES

Are the LVDS signal outputs at the LVDS 1st channel and 2nd channel of IC8001?
LVDS_TX_0_DATA0_P/N (C14/D14), LVDS_TX_0_DATA1_P/N (C15/D15), LVDS_TX_0_DATA2_P/N (C16/D16), LVDS_TX_0_DATA3_P/N (C18/D18), LVDS_TX_0_DATA4_P/N (C19/D19), LVDS_TX_0_CLK_P/N (C17/D17), LVDS_TX_1_DATA0_P/N (A14/B14), LVDS_TX_1_DATA1_P/N (A15/B15), LVDS_TX_1_DATA2_P/N (A16/B16), LVDS_TX_1_DATA3_P/N (A18/B18), LVDS_TX_1_DATA4_P/N (A19/B19), LVDS_TX_1_CLK_P/N (A17/B17).

NO → Check IC8001 and its peripheral circuits. (IC8152/IC8153, etc.)

YES

Check the panel module.

No audio (1)-1

INPUT-1 No audio.

Is INPUT-1 selected on the input select menu screen?

NO → Refer to ": No external input video [INPUT-1]".

YES

Is the audio output selected for "VARIABLE" on the menu screen?

NO → Set the audio output to "FIXED".

YES

Does the audio signal come from pins (5) (L) and (7) (R) of input terminal (J507) to pins (V30)(L) and (V29) (R) of IC8001 (CPU)?

NO → Check the line between J507 and IC8001.

YES

Does the audio signal come from pins (N29/N30) (PGA0OUT_L/R) of IC8001 (CPU) to pins (4/7) (INLP/INRP) of IC2701 (AMP)?

NO → Check the line between IC8001 and IC2701, and their peripheral circuits (Q1306/Q1307, AMP_MUTE line, etc.).

YES

Is the audio output from IC2701 as specified?

NO → Check IC2701 and its peripheral circuits.

YES

Check the connector (P2701), speakers and their peripheral circuits.

INPUT-2 No audio.

Is INPUT-2 selected on the input select menu screen?

NO → Refer to ": No external input video [INPUT-2]".

YES

Is the audio output selected for "VARIABLE" on the menu screen?

NO → Set the audio output to "FIXED".

YES

Does the audio signal come from pins (4) (L) and (2) (R) of input terminal (J503) to pins (U29) (L) and (U28) (R) of IC8001 (CPU)?

NO → Check the line between J503 and IC8001.

YES

No audio (1)-2

INPUT-3 No audio.

Is INPUT-3 selected on the input select menu screen?

NO → Refer to ": No external input video [INPUT-3]".

YES

Is the audio output selected for "VARIABLE" on the menu screen?

NO → Set the audio output to "FIXED".

YES

Does the audio signal come from pins (5) (L) and (4) (R) of input terminal (J501) to pins (U27) (L) and (U26) (R) of IC8001 (CPU)?

NO → Check the line between J501 and IC8001.

YES

Does the audio signal come from pins (N29/N30) (PGA0OUT_L/R) of IC8001 (CPU) to pins (4/7) (INLP/INRP) of IC2701 (AMP)?

NO → Check the line between IC8001 and IC2701, and their peripheral circuits (Q1306/Q1307, AMP_MUTE line, etc.).

YES

Is the audio output from IC2701 as specified?

NO → Check IC2701 and its peripheral circuits.

YES

Check the connector (P2701), speakers and their peripheral circuits.

No audio (2)

[PC analog audio input] INPUT-4 No audio.

Is INPUT-4 selected on the input select menu screen?

NO → Refer to ": No external input video [INPUT-4]".

YES

Is the audio output selected for "VARIABLE" on the menu screen?

NO → Set the audio output to "FIXED".

YES

Is the "PC Audio Select" selected for "Input4 (PC)" on the menu screen?

NO → Set the HDMI audio output to "Input4 (PC)".

YES

Does the audio signal come from pins (2) (L) and (3) (R) of input terminal (J1801) to pins (V28) (L) and (V27) (R) of IC8001 (CPU)?

YES

Does the audio signal come from pins (N29/N30) (PGA0OUT_L/R) of IC8001 (CPU) to pins (4/7) (INLP/INRP) of IC2701 (AMP)?

NO → Check the line between IC8001 and IC2701, and their peripheral circuits (Q1306/Q1307, AMP_MUTE line, etc.).

YES

Is the audio output from IC2701 as specified?

NO → Check IC2701 and its peripheral circuits.

YES

Check the connector (P2701), speakers and their peripheral circuits.

[HDMI analog audio input] INPUT-6 No audio.

Is INPUT-6 selected on the input select menu screen?

NO → Refer to ": No external input video [INPUT-6]".

YES

Is the audio output selected for "VARIABLE" on the menu screen?

NO → Set the audio output to "FIXED".

YES

Is the "PC Audio Select" selected for "Input6 (HDMI)" on the menu screen?

NO → Set the HDMI audio output to "Input6 (HDMI)".

YES

Is the HDMI audio output selected for "Digital" on the menu screen?

NO → Set the HDMI audio output to "Analog".

YES

NO

Check the line between J1801 and IC8001.

No audio (3)

No audio at UHF/VHF broadcast signal reception.

Is TV selected on the input select menu screen?

NO → Refer to “No video at UHF/VHF broadcast signal reception”.

YES

Is the audio output selected for “VARIABLE” on the menu screen?

NO → Set the audio output to “FIXED”.

YES

Is there the SIF signal output at pin (16) of tuner (TU1101)?

NO → Check the tuner (TU1101) and its peripheral circuits.
(I2C line: TUN_SCL/TUN_SDA, etc.)

YES

Does the SIF signal come from pin (16) of tuner (TU1101) to pin (D5) of IC8001 (CPU)?

NO → Check the line between TU1101 and IC8001, and their peripheral circuits (Q1101, Q1102, etc.).

YES

No audio at digital broadcast signal reception.

Is TV selected on the input select menu screen?

NO → Refer to “No video at digital broadcast signal reception”.

YES

If no video appears, refer to “No video at digital broadcast signal reception”.

Is the audio output selected for “VARIABLE” on the menu screen?

NO → Set the audio output to “FIXED”.

YES

Does the audio signal come from pins (N29/N30) (PGA0OUT_L/R) of IC8001 (CPU) to pins (4/7) (INLP/INRP) of IC2701 (AMP)?

NO → Check the line between IC8001 and IC2701, and their peripheral circuits (Q1306/Q1307, AMP_MUTE line, etc.).

YES

Is the audio output from IC2701 as specified?

NO → Check IC2701 and its peripheral circuits.

YES

Check the connector (P2701), speakers and their peripheral circuits.

No audio (4)

↓

INPUT-5 No audio (HDMI connected)
INPUT-6 No audio (HDMI connected)
INPUT-7 No audio (HDMI connected)
INPUT-8 No audio (HDMI connected)
INPUT-9 No audio (HDMI connected)

↓

[INPUT-5 input]
Is INPUT-5 selected on the input select menu screen?
[INPUT-6 input]
Is INPUT-6 selected on the input select menu screen?
[INPUT-7 input]
Is INPUT-7 selected on the input select menu screen?
[INPUT-8 input]
Is INPUT-8 selected on the input select menu screen?
[INPUT-9 input]
Is INPUT-9 selected on the input select menu screen?

↓ NO
Refer to ": No external input video [INPUT-5/6/7/8/9]".

↓ YES

[INPUT-5 input]
If no video appears, refer to "No external input video (HDMI) [INPUT-5]".
[INPUT-6 input]
If no video appears, refer to "No external input video (HDMI) [INPUT-6]".
[INPUT-7 input]
If no video appears, refer to "No external input video (HDMI) [INPUT-7]".
[INPUT-8 input]
If no video appears, refer to "No external input video (HDMI) [INPUT-8]".
[INPUT-9 input]
If no video appears, refer to "No external input video (HDMI) [INPUT-9]".

↓

Is the audio output selected for "VARIABLE" on the menu screen?

↓ NO
Set the audio output to "FIXED".

↓ YES

Does the audio signal come from pins (N29/N30) (PGA0OUT_L/R) of IC8001 (CPU) to pins (3/7)(INLP/INRP) of IC2701 (AMP)?

↓ NO
Check the line between IC8001 and IC2701, and their peripheral circuits (Q1306/ Q1307, AMP_MUTE line, etc.).

↓ YES

Is the audio output from IC2701 as specified?

↓ NO
Check IC2701 and its peripheral circuits.

↓ YES

Check the connector (P2701), speakers and their peripheral circuits.

No audio signal at Digital Audio Output terminal (Analog sound heard)

No INPUT-5/6/7/8/9 (HDMI) audio.

If no video appears, refer to “No external input video (HDMI) [INPUT-5/6/7/8/9]”.

No audio at digital broadcast signal reception.

If no video appears, refer to “No video at digital broadcast signal reception”.

Is there the SPDIF signal output (OPT_OUT) at pin (J28) of IC8001 (CPU)?

NO

Check the IC8001 and its peripheral circuits.

YES

Is there the SPDIF signal (OPT_OUT) input at pin (2) of IC1303 (SPDIF SELECTOR)?

NO

Check the line between IC8001 and IC1303.

YES

Is there the SELECT signal input at pin (6) of IC1303? (High)

NO

Check IC1301, and it peripheral circuits.

YES

Is there the MUTE signal input at pin (7) of IC1303? (usual: Low, Mute: High)

NO

Check the MUTE_A_ALL and AC_DET signals, and their peripheral circuits (Q1304, D1301, D1310, etc.).

YES

Is there the SPDIF signal input at pin (1) of D1306 (OPTICAL OUTPUT)?

YES

Check the speakers and the optical cable.

NO

Check D1306 and its peripheral circuits.

No optical output under the following conditions as per HDMI requirements.
* Audio contents protected.
* Audio frequency beyond 48kHz.
* Audio bit length beyond 16bits.

No monitor audio output

Is the audio output from the monitor set at “VARIABLE” or “FIXED” on the menu screen?

NO

Check IC8001 (CPU) and its peripheral circuits.

YES

Are there the audio signal outputs at pins (N27) (PGA1OUT_L) and (N28) (PGA1OUT_R) of IC8001 (CPU)?

NO

Check IC8001 (CPU) and its peripheral circuits.

YES

Does the audio signal come from pins (N27) (PGA1OUT_L) and (N28) (PGA1OUT_R) of IC8001 to pins (4) (L) and (2) (R) of J505?

NO

Check the line between IC8001 and J505 and their peripheral circuits.

Check the LINE_MUTE line and its peripheral circuits (Q1310/Q1311, etc.).

YES

Check the connector (J505) and their peripheral circuits, and speakers and the Cable.

LED flashing timing chart for error notification.

1) Power LED (Large classification)

Error type	Power green LED operation (1 cycle)	Pins are monitor microprocessor (IC2002) pins.
Lamp error Flashes once: Fast	H: On L: Off	ERR_PNL (43pin): L error. Confirmed after 10 consecutive detections at 500 ms intervals (detected only when the backlight is on). Note that after five detection counts, the lamp cannot be activated except in the monitoring process. (For the first time, only the inverter is reset, and error OFF is not activated.) [Clearing method of the accumulated counts] •Set "LAMP ERROR" on page 1 of the process A to 0. •AC_ON is performed with [CH_DOWN] and [VOL_UP] on the unit down. •Continuous illumination for 3 minutes.
Power error Flashes twice	H: On L: Off	Refer to "Power error details".
Communication error with the main CPU Flashes 3 times	H: On L: Off	Refer to "Communication error details". Communication line error or main CPU communication error → Check debug statements for the main CPU. Communication line with the main CPU: TxD(28pin), RxD(29pin)
Vsync error Flashes 4 times	H: On L: Off	VSYNC (52pin) error (L or H fixed). Image processing IC operation error. Detection is performed during operation (interrupt).
Monitor temperature error Flashes 5 times	H: On L: Off	If the panel temperature is 60°C or more for 15 seconds or more in a row, CAUTION appears on the OSD ("TEMPERATURE" flashes in red in the lower right portion of the screen). If the panel temperature is 60°C or more for 25 seconds or more in a row, error standby is activated. [Avoidance method] Reduce the value of MONITOR MAX TEMP (temperature protection threshold) on page 28 of the process A.
BD unit error Flashes 6 times	H: On L: Off	BD unit error For the error details, refer to "standby cause" in the process menu.
Program area data destruction Flashes 8 times	H: On L: Off	Flash ROM data error in the microprocessor [Recovery method] Write the microprocessor software.

2) Power error details (Power LED flashes twice and OPC LED flashes)

Error type	OPC LED operation (1 cycle)	Pins are monitor microprocessor pins unless otherwise specified.
DET_10V error Flashes once	H: On L: Off	DET_10V (57pin). UR10V or A9V is not applied. If error is detected during operation, error standby is activated by polling.
DET_D3V3 error Flashes twice	H: On L: Off	DET_D3V3 (59pin) error (L). D3.3V is not applied. If error is detected during operation, error standby is activated by polling.
DET_6V error Flashes 3 times	H: On L: Off	DET_6V (56pin) error (L). D5V or A5V is not applied. If error is detected during operation, error standby is activated by polling.
PNL_12V error Flashes 5 times	H: On L: Off	DET_PNL_12V (58pin) error (L). Panel power is not applied. If error is detected during operation, error standby is activated by polling.
Main error Flashes 7 times	H: On L: Off	Main microprocessor detection error (FAN error, 1bitAMP error, etc.) Details are displayed in “ERROR STANDBY CAUSE” on page 1 of the process A for the main microprocessor.
TCON ROM error Flashes 8 times	H: On L: Off	LCD controller ROM error It is notified by communication from the main CPU.

3) Communication error details (Power LED flashes 3 times and OPC LED flashes)

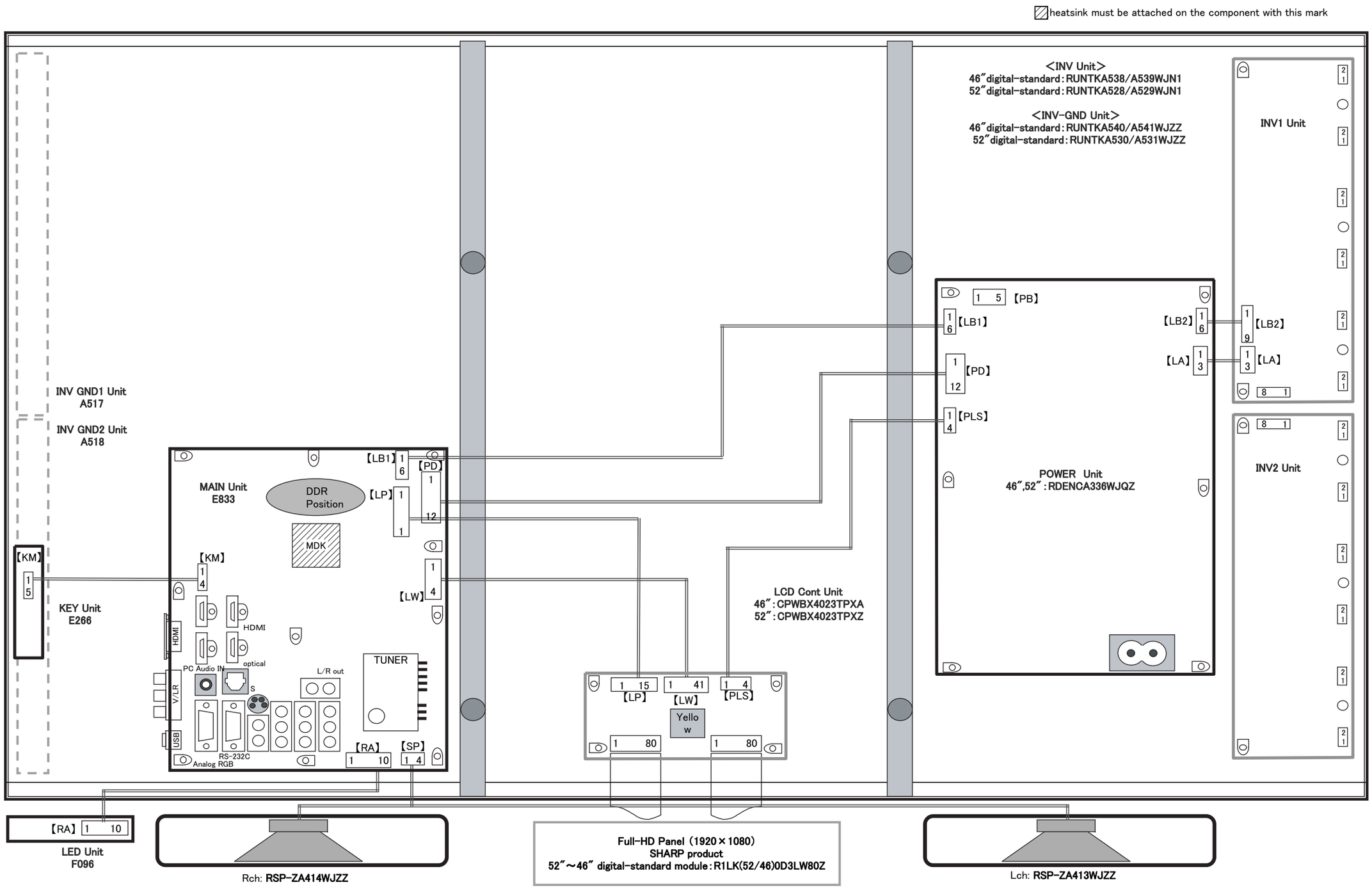
Error type	OPC LED operation (1 cycle)	Basically, log analysis of debug print statements or communication log analysis by a bus monitor is performed.
Initial communication reception error Flashes once	H: On L: Off	Initial communication from the main CPU is not received. (Request for the monitor model No. is not received after canceling the reset.) → Communication line error or main CPU start-up failure.
Time-out setting reception error Start-up confirmation reception error Flashes twice	H: On L: Off	Time-out setting and start-up mode change from the main CPU is not received. (Start-up communication of time-out setting and start-up mode change is not received.) → Main CPU start-up failure or monitor microprocessor reception failure.
Regular communication error Flashes 3 times	H: On L: Off	Regular communication that is performed at 1 second intervals in the normal operation is interrupted. → Main CPU operation failure or monitor microprocessor reception failure.

MONITOR_ERR_CAUSE list

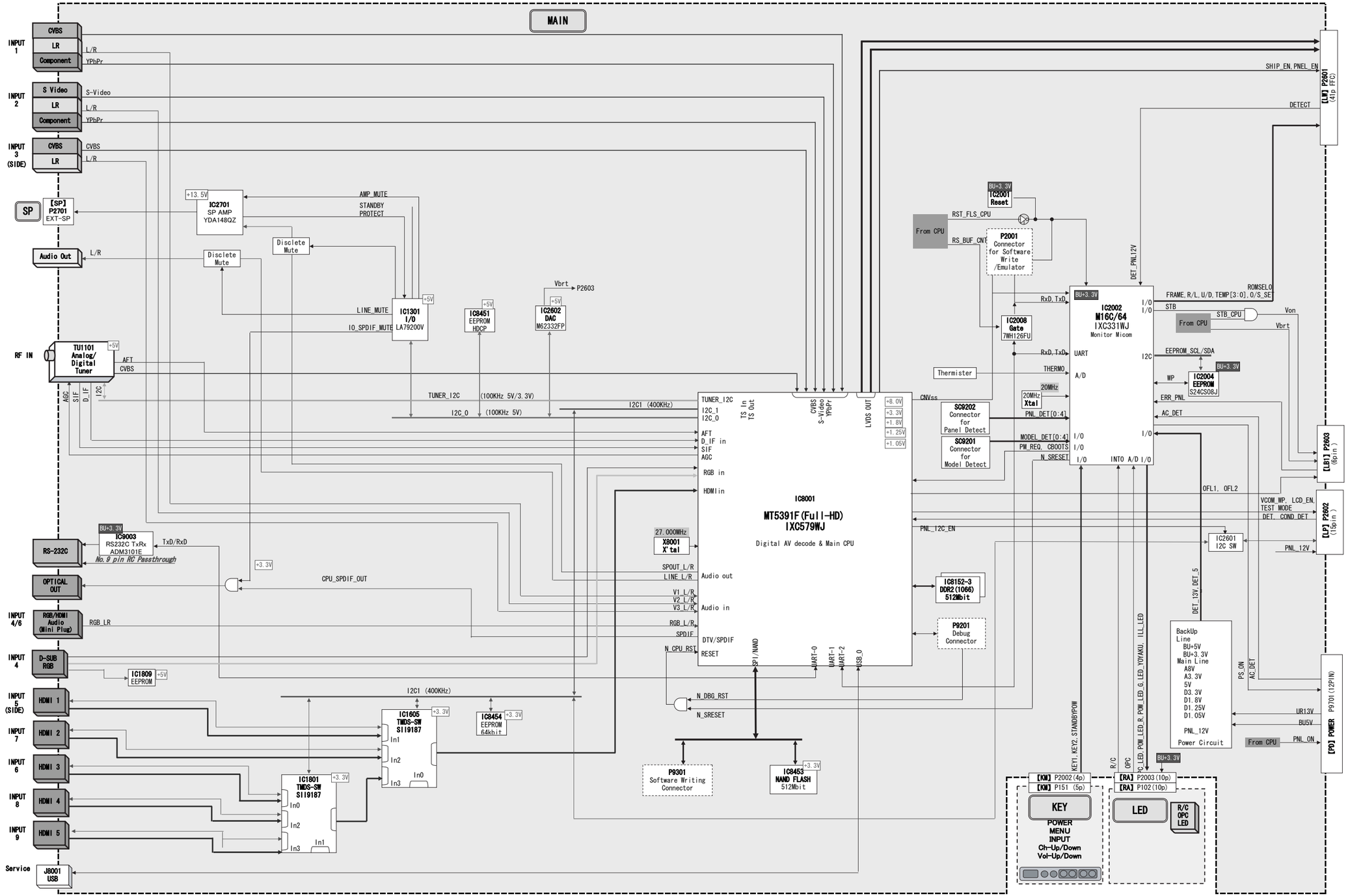
No.		Description
Dec.	Hex.	
0	0	No error
1	1	6V detection error
2	2	Panel 5V detection error
3	3	10V detection error
4	4	D3.3V detection error
5	5	VSYNC error
6	6	Lamp error
8	8	Main CPU reset cancel - Start-up completion command reception time-out
9	9	Start-up completion command reception - Time-out setting command reception time-out
10	A	Time-out setting command reception - Start-up reason change command reception time-out
11	B	Regular communication time-out
12	C	Temperature protection
16	10	Error notification from the main CPU
17	11	Time-out during ending sequence
18	12	TCON ROM error
19	13	BD unit error

CHAPTER 7. OVERALL WIRING/SYSTEM BLOCK DIAGRAM

[1] OVERALL WIRING DIAGRAM



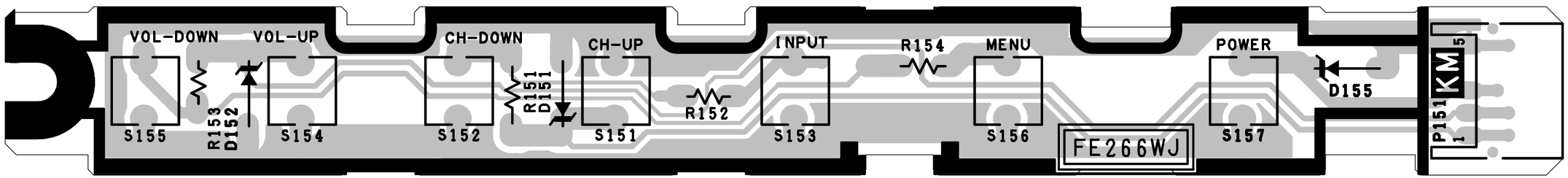
[2] SYSTEM BLOCK DIAGRAM



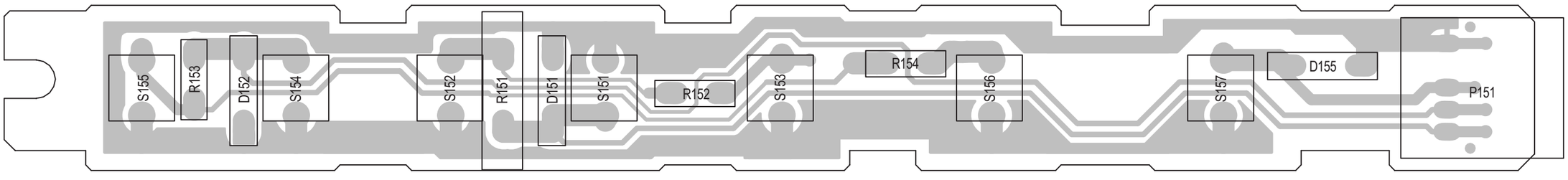
CHAPTER 8. PRINTED WIRING BOARD ASSEMBLIES

[1] KEY Unit

KEY Unit (Side A)

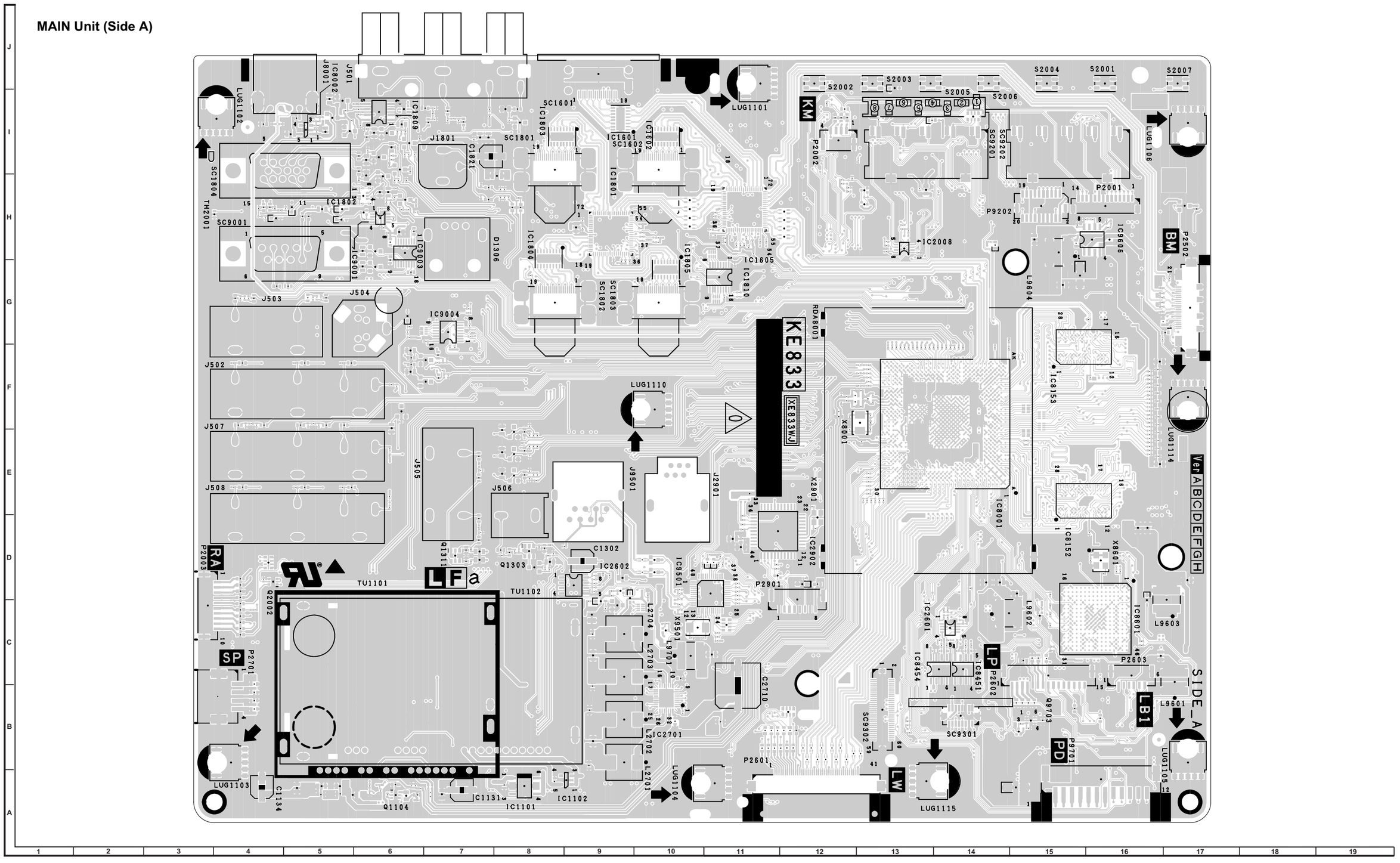


KEY Unit (Chip Side A)

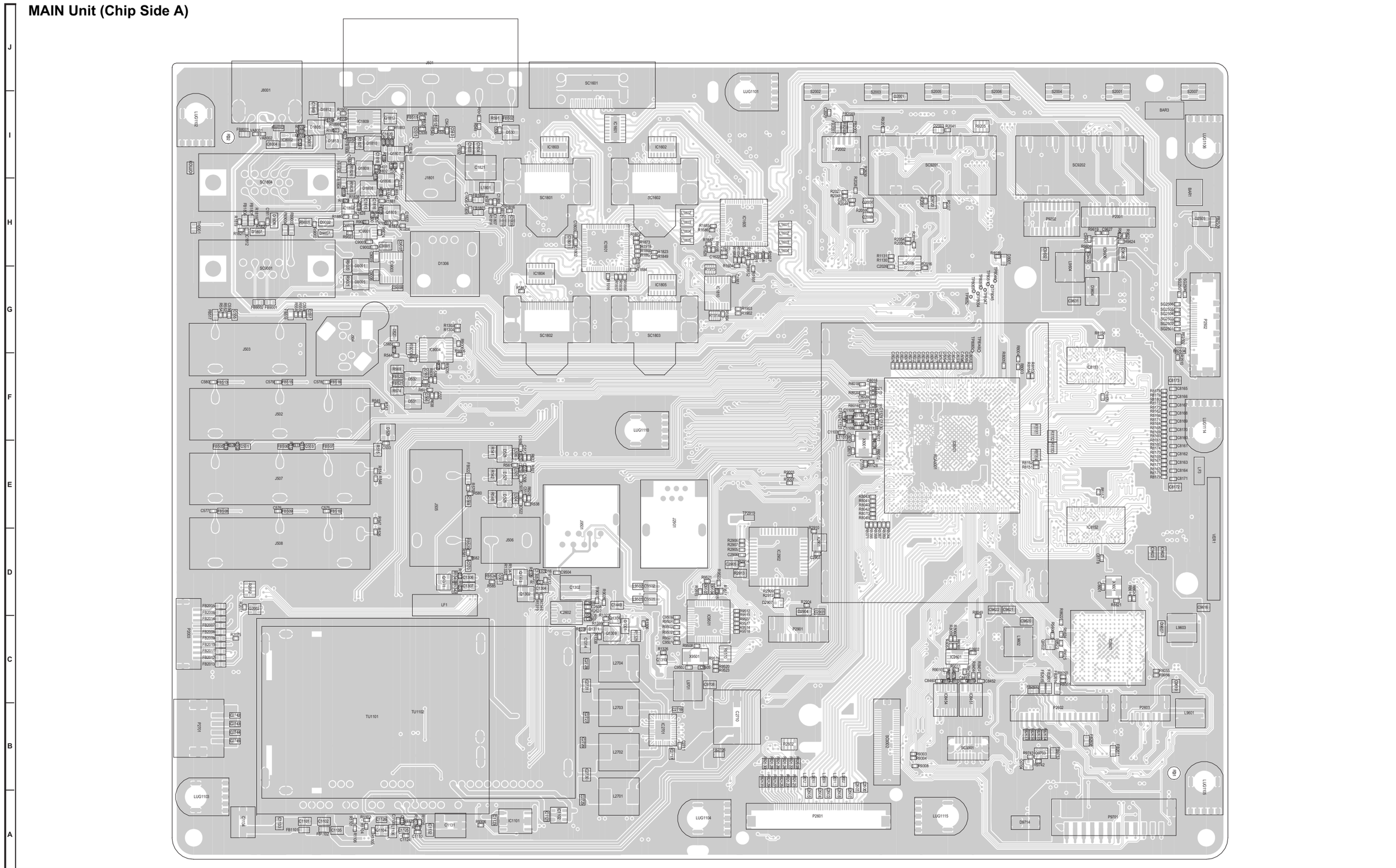


[2] MAIN Unit

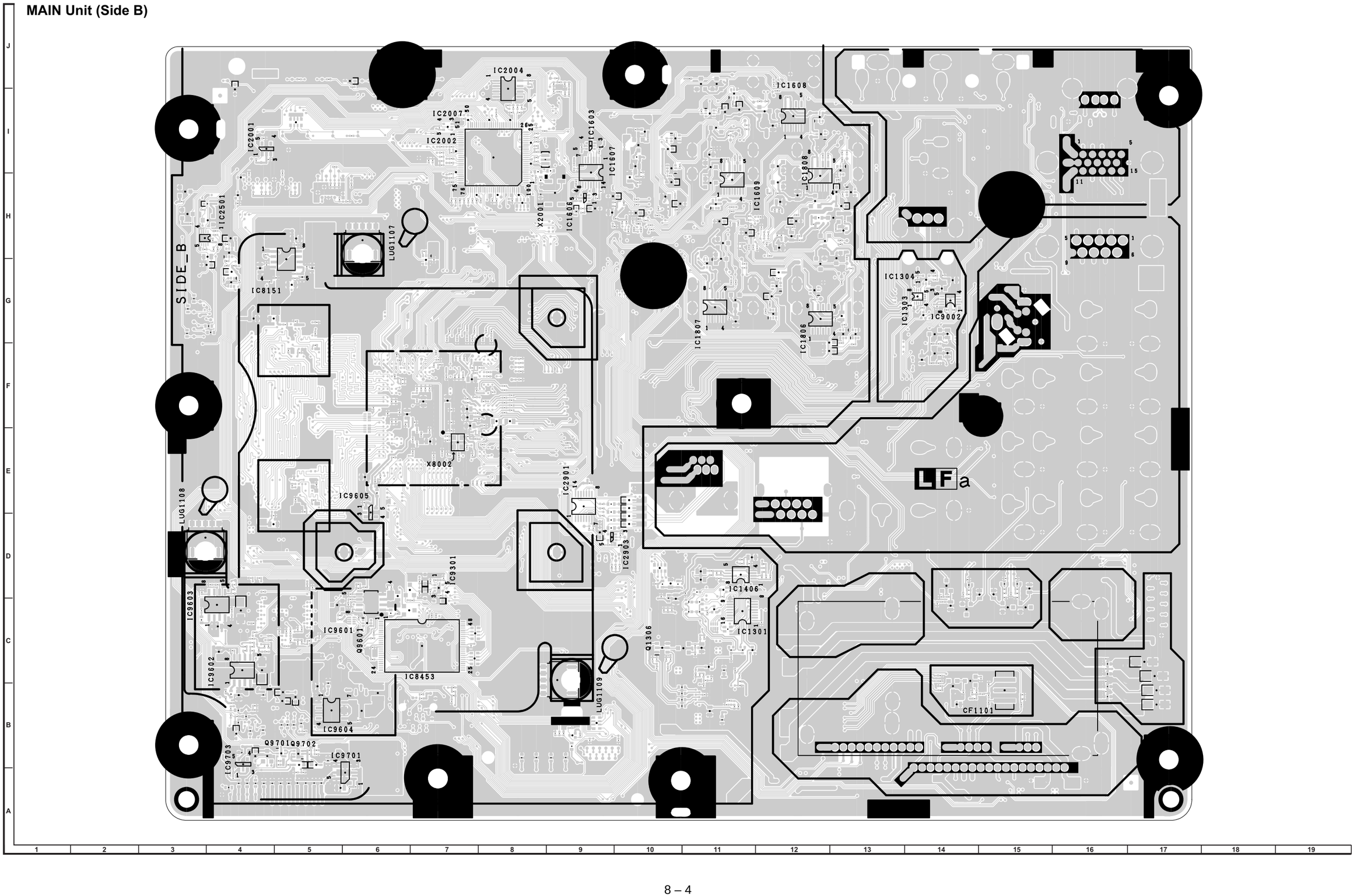
MAIN Unit (Side A)



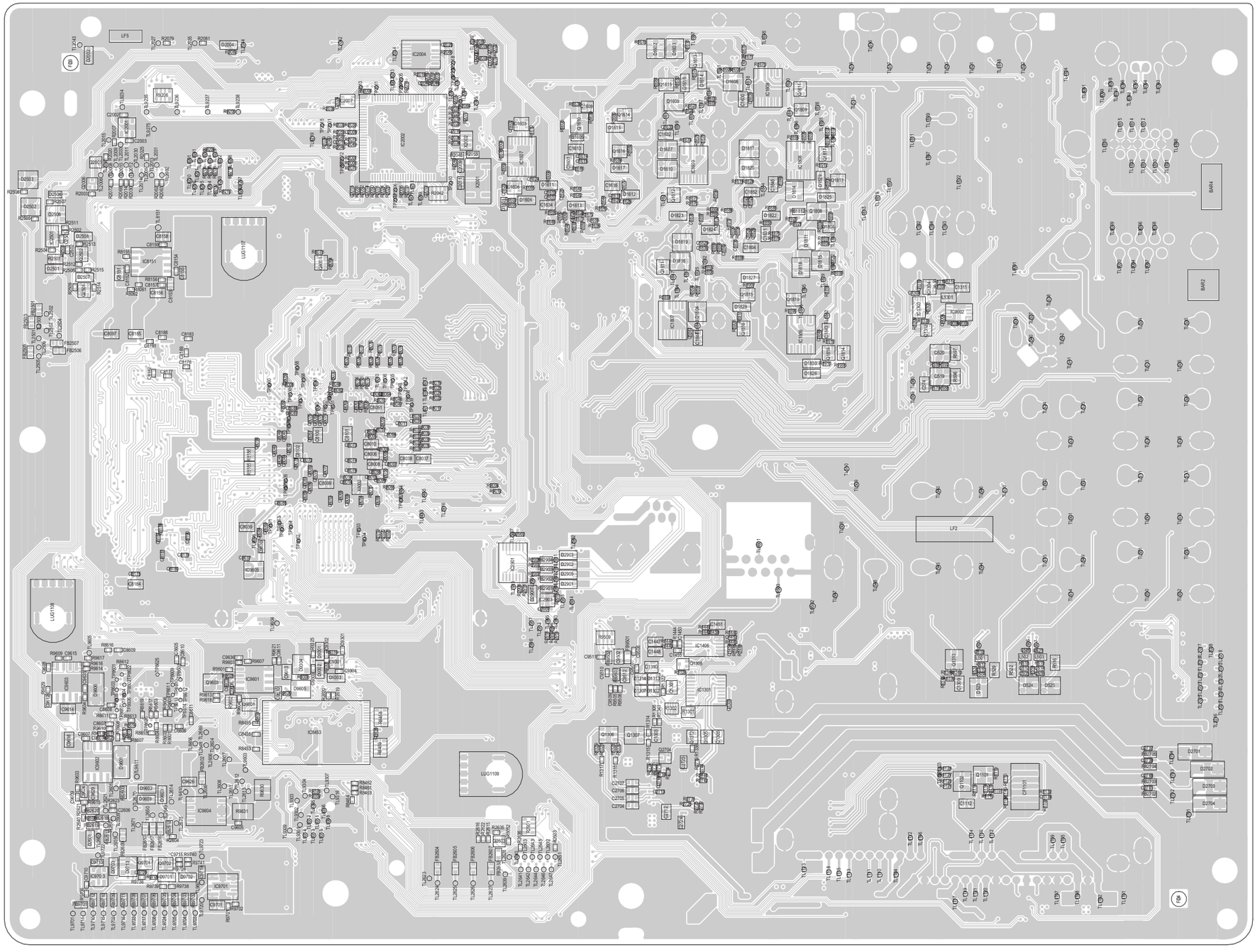
MAIN Unit (Chip Side A)



MAIN Unit (Side B)

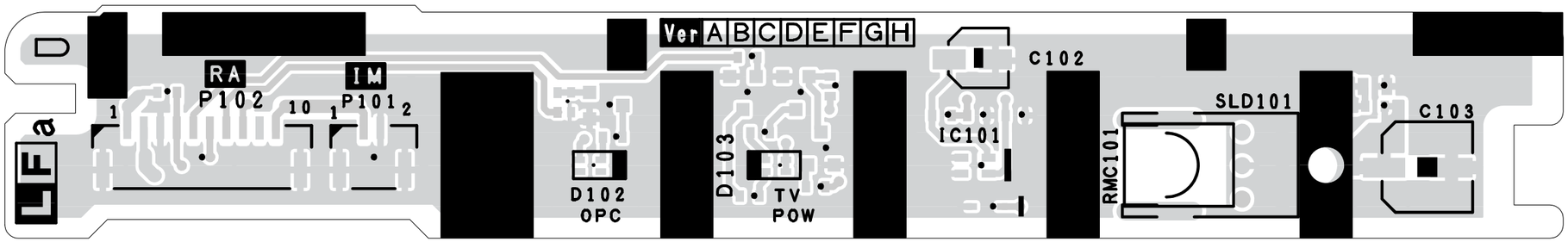


MAIN Unit (Chip Side B)

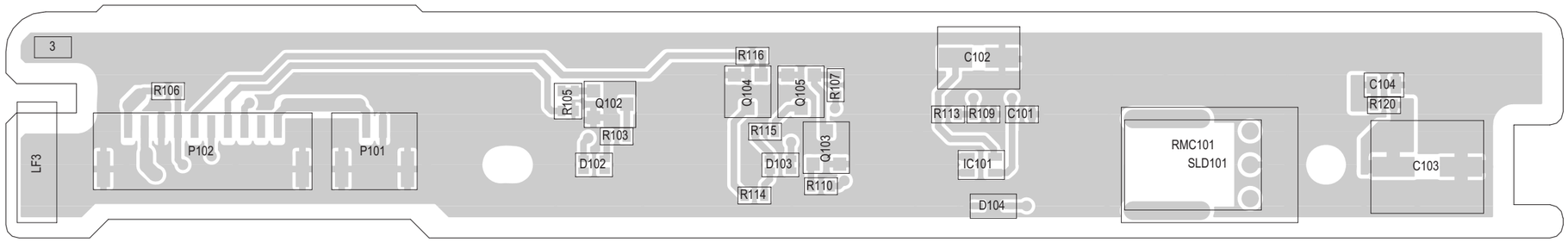


[3] LED Unit

LED Unit (Side A)



LED Unit (Chip Side A)



CHAPTER 9. SCHEMATIC DIAGRAM

[1] DESCRIPTION OF SCHEMATIC DIAGRAM

1. VOLTAGE MEASUREMENT CONDITION:

1) The voltages at test points are measured on exclusive AC adaptor and the stable supply voltage of AC 120V. Signals are fed by a color bar signal generator for servicing purpose and the above voltages are measured with a 20k ohm/V tester.

2. INDICATION OF RESISTOR & CAPACITOR:

RESISTOR

1) The unit of resistance "Ω" is omitted.
   (K=kΩ=1000Ω, M=MΩ).
2) All resistors are ± 5%, unless otherwise noted.
   (K= ± 10%, F= ± 1%, D= ± 0.5%)
3) All resistors are 1/16W, unless otherwise noted.

CAPACITOR

1) All capacitors are μF, unless otherwise noted.
   (P=pF=μμF).
2) All capacitors are 50V, unless otherwise noted.

CAUTION:
This circuit diagram is original one, therefore there may be a slight difference from yours.

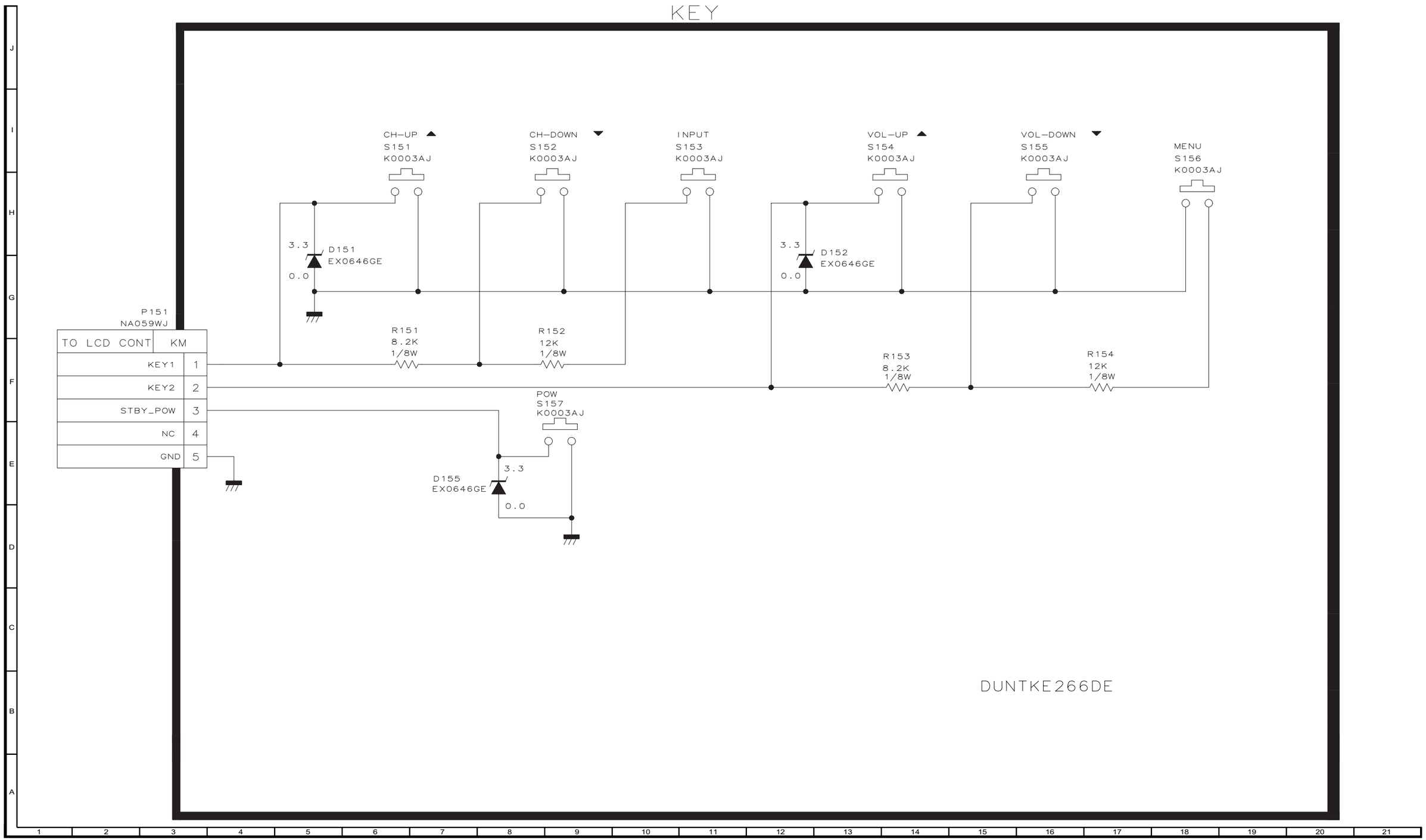
SAFETY NOTES:
1) DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACING PARTS.
2) SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.

IMPORTANT SAFETY NOTICE:
PARTS MARKED WITH " ⚠ " ([redacted]) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

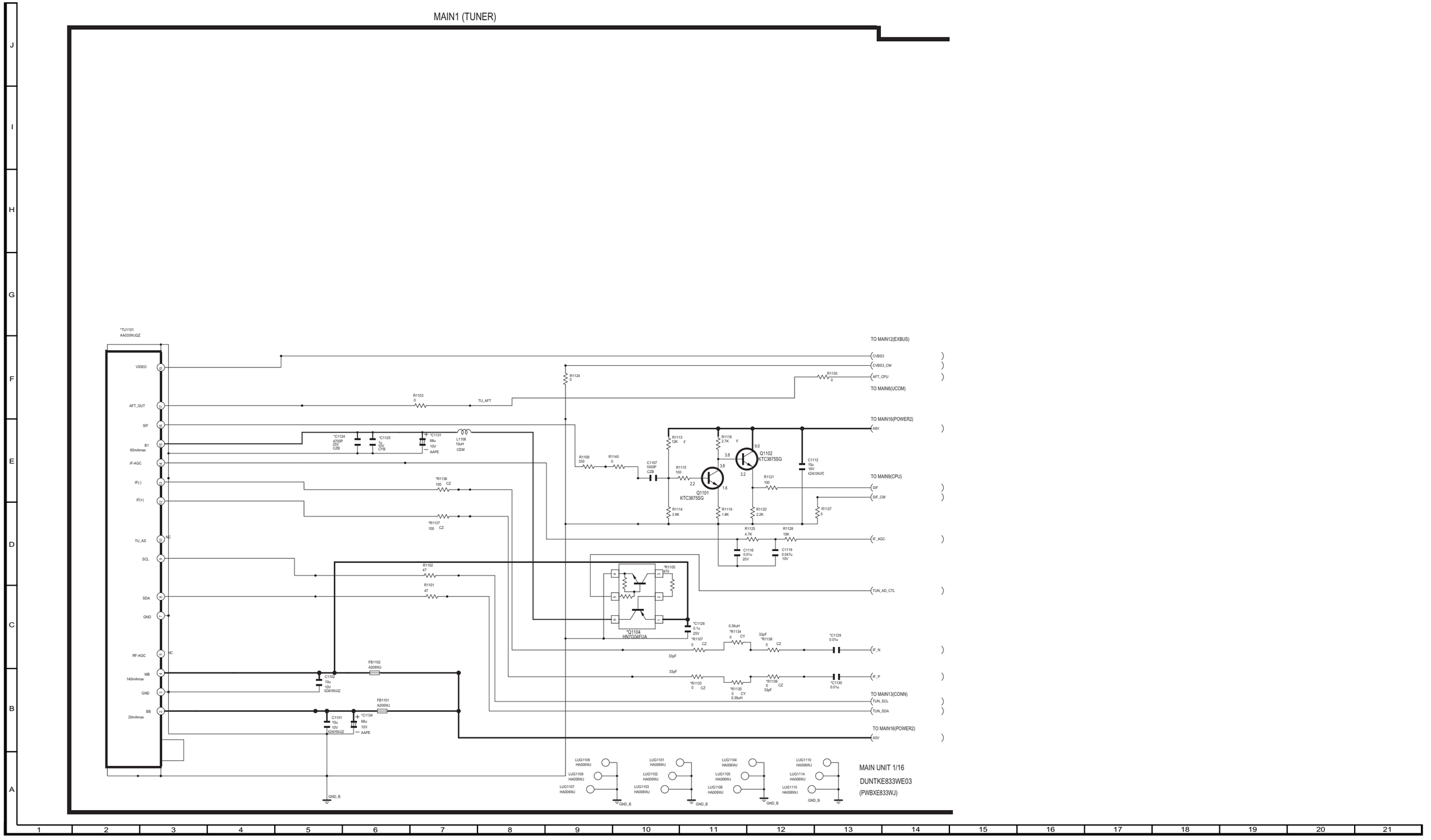
AVIS DE SECURITE IMPORTANT:
LES PIECES MARQUEES " ⚠ " ([redacted]) SONT IMPORTANTES POUR MAINTENIR LA SECURITE DE L'APPAREIL.
NE REMPLACER CES PIEDES QUE PAR DES PIECES DONT LE NUMERO EST SPECIFIE POUR MAINTENIR LA SECURITE ET PROTEGER LE BON FONCTIONNEMENT DE L'APPAREIL.

[2] SCHEMATIC DIAGRAM

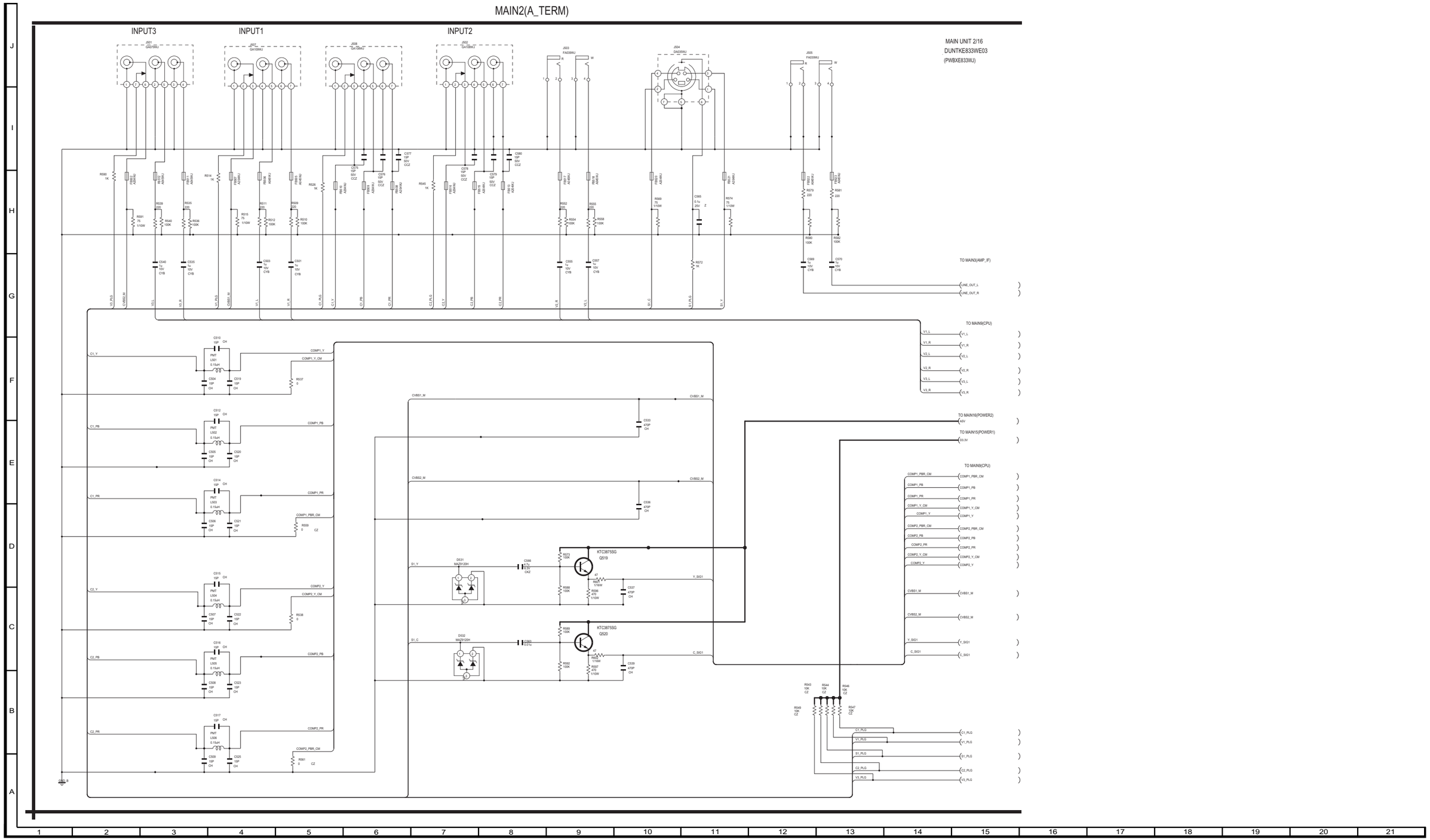
1. KEY UNIT



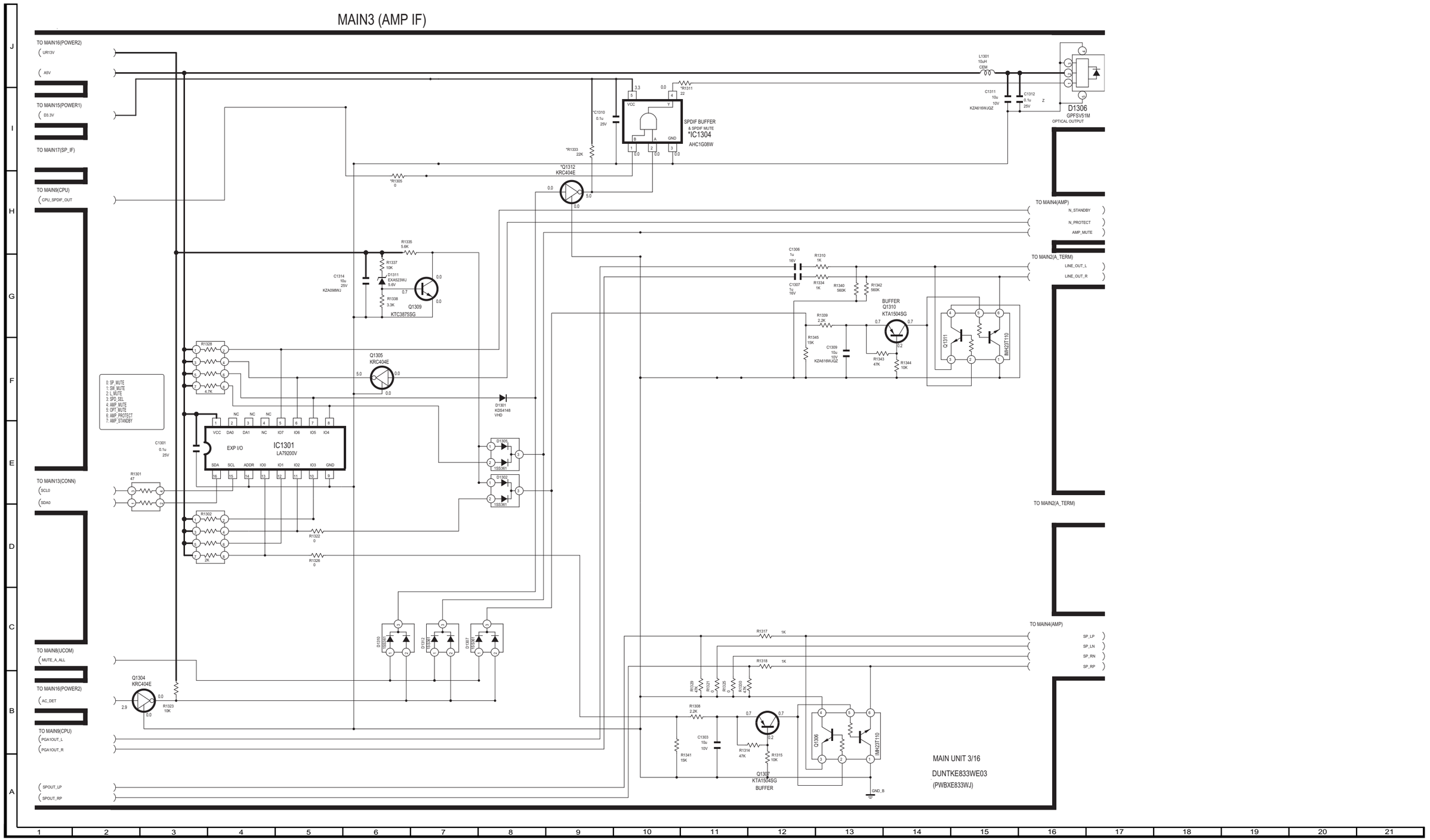
2. MAIN UNIT-1


MAIN1 (TUNER)
*TU1101
AA033WJQZ
VIDEO
AFT_OUT
SIF
B1
60mAmax
IF-AGC
IF(-)
IF(+)
TU_AS
SCL
SDA
GND
RF-AGC
MB
140mAmax
GND
BB
20mAmax
NC
R1103 0
TU_AFT
R1124 0
TO MAIN12(EXBUS)
CVBS3
CVBS3_CM
AFT_CPU
R1130 0
TO MAIN8(UCOM)
TO MAIN16(POWER2)
M5V
*C1124 4700P 25V CZB
*C1125 10u 16V CYB
*C1131 68u 10V AAPE
L1106 10uH CEM
R1109 330
R1140 0
C1107 1000P CZB
R1113 10K F
R1118 2.7K F
R1115 100
R1114 3.9K
R1119 1.8K
R1120 2.2K
Q1102 KTC3875SG
Q1101 KTC3875SG
C1112 10u 16V KZ4016WJP2
TO MAIN9(CPU)
R1121 100
SIF
SIF_CM
R1127 0
*R1136 100 CZ
*R1137 100 CZ
R1125 4.7K
R1128 10K
C1116 0.01u 25V
C1119 0.047u 10V
IF_AGC
R1102 47
R1101 47
*R1105 470
*Q1104 HN7G04FUA
TUN_AD_CTL
*C1126 0.1u 25V
*R1107 0 CZ
33pF
0.39uH
*R1134 0 CY
33pF
*R1138 0 CZ
*C1129 0.01u
IF_N
*R1133 0 CZ
*R1135 0 CY 0.39uH
*R1139 0 CZ 33pF
*C1130 0.01u
IF_P
TO MAIN13(CONN)
TUN_SCL
TUN_SDA
TO MAIN16(POWER2)
A5V
C1102 10u 10V KZ4016WJQZ
FB1102 A206WJ
FB1101 A206WJ
C1101 10u 10V KZ4016WJQZ
*C1134 68u 10V AAPE
GND_B
LUG1109 HA006WJ
LUG1108 HA006WJ
LUG1107 HA006WJ
LUG1101 HA006WJ
LUG1102 HA006WJ
LUG1103 HA006WJ
LUG1104 HA006WJ
LUG1105 HA006WJ
LUG1106 HA006WJ
LUG1110 HA006WJ
LUG1114 HA006WJ
LUG1115 HA006WJ
MAIN UNIT 1/16
DUNTKE833WE03
(PWBXE833WJ)

3. MAIN UNIT-2


MAIN2(A_TERM)
INPUT3
INPUT1
INPUT2
MAIN UNIT 2/16
DUNTKE833WE03
(PWBXE833WJ)
TO MAIN3(AMP_IF)
LINE_OUT_L
LINE_OUT_R
TO MAIN9(CPU)
TO MAIN16(POWER2)
TO MAIN15(POWER1)
TO MAIN9(CPU)
KTC3875SG
Q519
Q520
COMP1_Y
COMP1_Y_CM
COMP1_PB
COMP1_PR
COMP1_PBR_CM
COMP2_Y
COMP2_Y_CM
COMP2_PB
COMP2_PR
COMP2_PBR_CM
CVBS1_M
CVBS2_M
Y_SIG1
C_SIG1
C1_PLG
Y1_PLG
S1_PLG
C2_PLG
Y3_PLG

4. MAIN UNIT-3


MAIN3 (AMP IF)
TO MAIN16(POWER2)
UR13V
A5V
TO MAIN15(POWER1)
D3.3V
TO MAIN17(SP_IF)
TO MAIN9(CPU)
CPU_SPDIF_OUT
0: SP_MUTE
1: SW_MUTE
2: L_MUTE
3: SPD_SEL
4: AMP_MUTE
5: OPT_MUTE
6: AMP_PROTECT
7: AMP_STANDBY
TO MAIN13(CONN)
SCL0
SDA0
TO MAIN8(UCOM)
MUTE_A_ALL
TO MAIN16(POWER2)
AC_DET
TO MAIN9(CPU)
PGA1OUT_L
PGA1OUT_R
SPOUT_LP
SPOUT_RP
L1301
10uH
CEM
C1311
10u
10V
KZA616WJQZ
C1312
0.1u
25V
Z
D1306
GPFSV51M
OPTICAL OUTPUT
*C1310
0.1u
25V
*R1311
22
SPDIF BUFFER
& SPDIF MUTE
*IC1304
AHC1G08W
*R1333
22K
*R1305
0
*Q1312
KRC404E
TO MAIN4(AMP)
N_STANDBY
N_PROTECT
AMP_MUTE
TO MAIN2(A_TERM)
LINE_OUT_L
LINE_OUT_R
R1335
5.6K
R1337
15K
C1314
10u
25V
KZA09BWJ
D1311
EXA523WJ
5.6V
R1338
3.3K
Q1309
KTC3875SG
C1306
1u
16V
R1310
1K
C1307
1u
16V
R1334
1K
R1340
560K
R1342
560K
BUFFER
Q1310
KTA1504SG
R1339
2.2K
R1345
10K
C1309
10u
10V
KZA616WJQZ
R1343
47K
R1344
10K
Q1311
RNH23T110
R1328
4.7K
Q1305
KRC404E
D1301
KDS4148
VHD
NC
VCC
DA0
DA1
IO7
IO6
IO5
IO4
EXP I/O
IC1301
LA79200V
SDA
SCL
ADDR
IO0
IO1
IO2
IO3
GND
C1301
0.1u
25V
R1301
47
D1305
1SS361
D1302
1SS361
R1302
2K
R1322
0
R1326
0
D1310
1SS361
D1312
1SS361
D1307
1SS361
Q1304
KRC404E
R1323
10K
TO MAIN4(AMP)
SP_LP
SP_LN
SP_RN
SP_RP
R1317
1K
R1318
1K
R1329
47K
R1331
0
R1332
0
R1330
47K
R1308
2.2K
C1303
10u
10V
R1341
15K
R1314
47K
R1315
10K
Q1307
KTA1504SG
BUFFER
Q1306
RNH23T110
GND_B
MAIN UNIT 3/16
DUNTKE833WE03
(PWBXE833WJ)

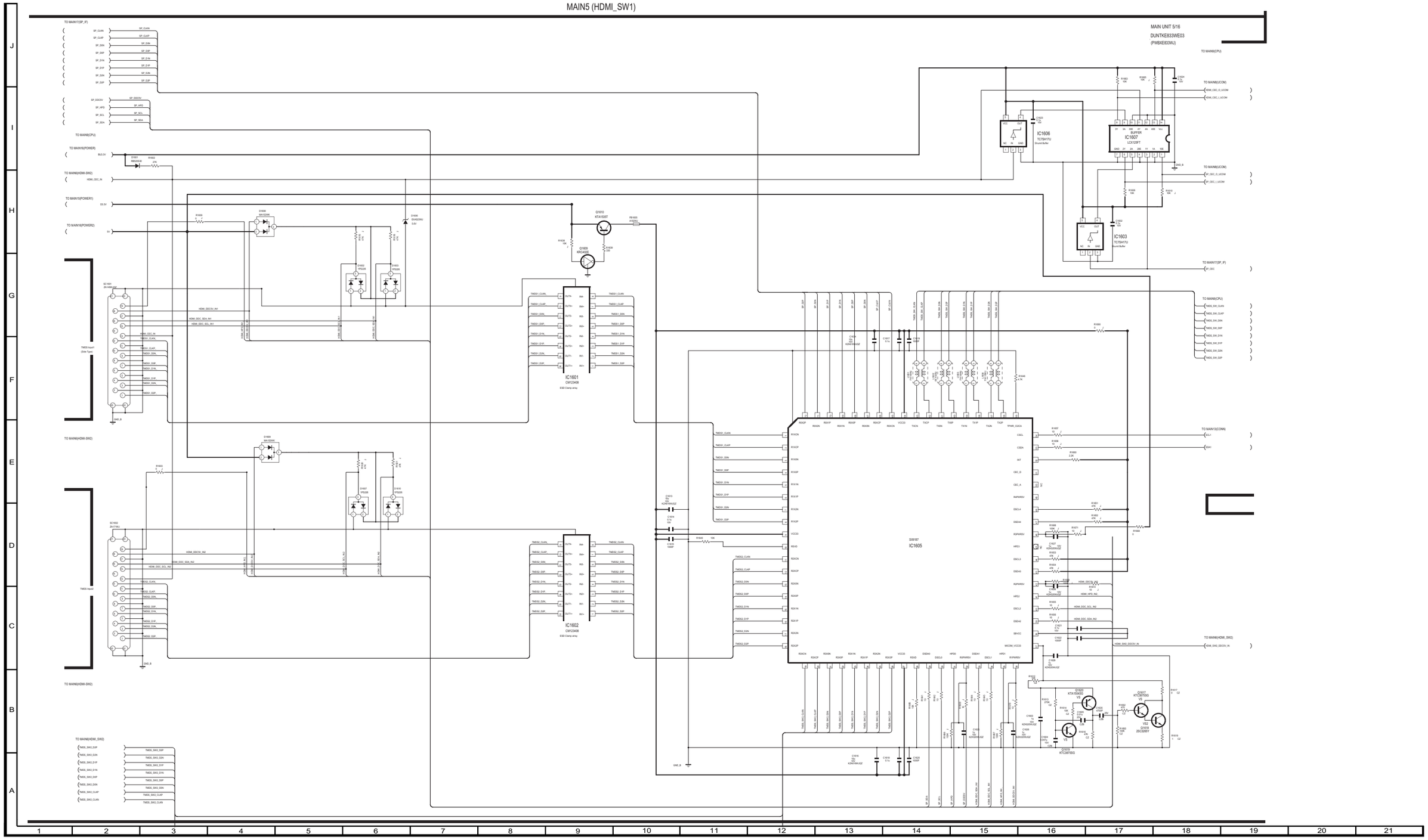
5. MAIN UNIT-4

MAIN4(AMP)

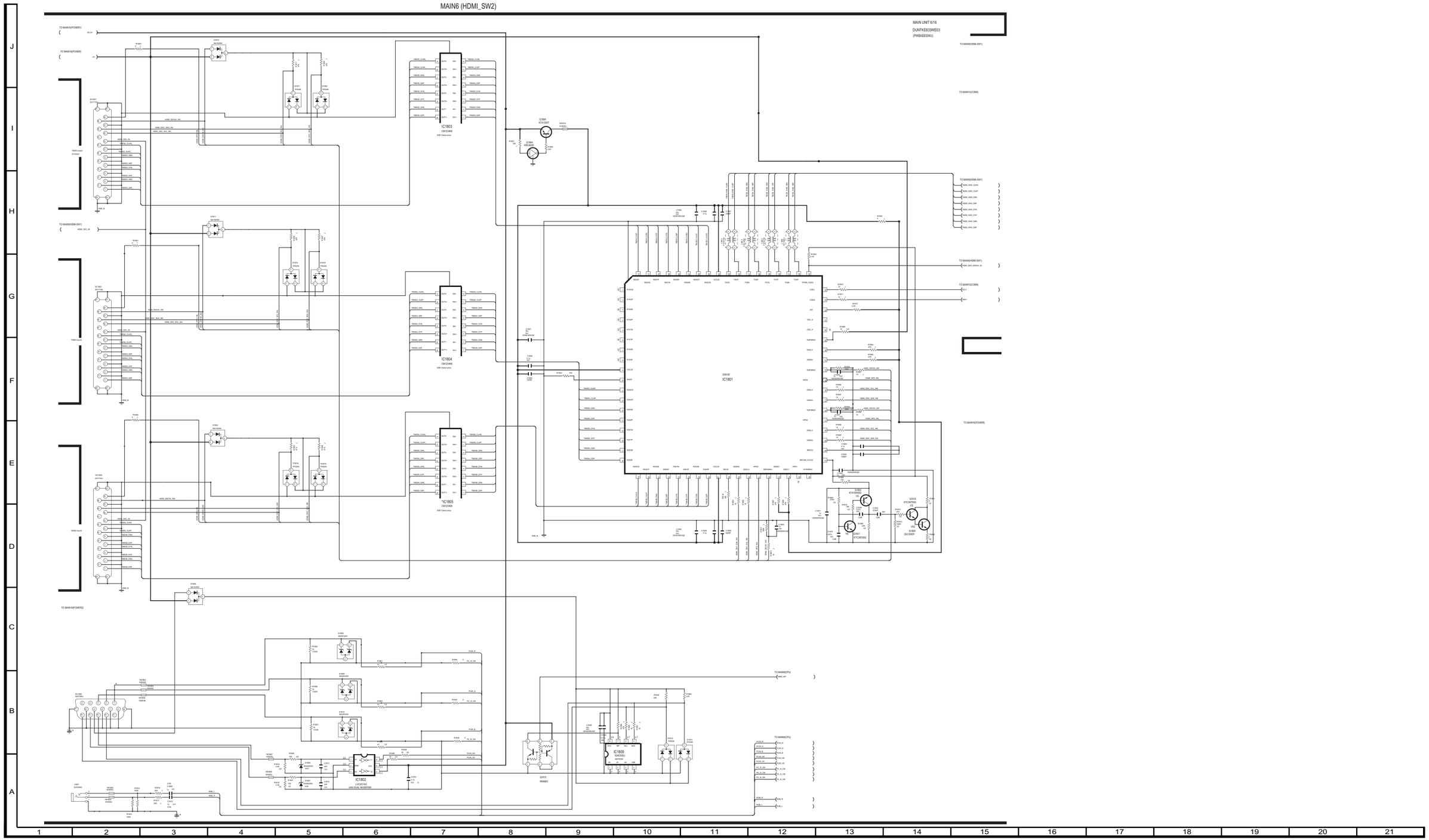
MAIN UNIT 4/16
DUNTKE833WE03
(PWBXE833WJ)

TO MAIN3(AMP IF)
N_STANDBY
N_PROTECT
AMP_MUTE
R2719 5.6K
R2752 220K F
VS
Q2704
KRC404E
TO MAIN16(POWER2)
UR13V
FB2706 A206WJ
C2710 RMZ 470u 25V
C2711 0.1u 25V
C2712 10u 10V
KZA616WJQZ
C2717 1u 25V
C2724 1u 25V
L2701 22uH PA343WJPZ
L2702 22uH PA343WJPZ
C2725 0.1u 25V
C2726 0.1u 25V
C2730 0.22u 25V
IC2701
YDA148QZ
PVDDREG
AVDD
INLP
ILM
VREF
INRM
INRP
AVSS
PLIMIT
PVDDPR
OUTPR
OUTPR
PVSSR
OUTMR
OUTMR
PVDDMR
PVDDPL
OUTPL
OUTPL
PVSSL
OUTML
OUTML
PVDDML
GAIN1
GAIN0
NCDRC1
NCDRC0
CKIN
CKOUT
MUTEN
PROTN
SLEEPN
NC
TO MAIN3(AMP IF)
SP_LP
SP_LN
SP_RN
SP_RP
C2704 1u 25V KZA114WJ
C2705 1u 25V KZA114WJ
C2706 1u 25V KZA114WJ
C2707 1u 25V KZA114WJ
C2713 0.1u 25V
R2715 220K F
R2717 27K
R2753 68K F
R2754 22K F
C2748 100P
C2716 1u 25V
C2723 1u 25V
R2731 0
R2726 0
R2741 75K
R2744 22
R2742 27K
C2727 0.1u 25V
C2728 0.1u 25V
C2731 0.22u 25V
L2703 22uH PA343WJPZ
L2704 22uH PA343WJPZ
FB2702 A206WJ
FB2703 A206WJ
FB2704 A206WJ
FB2705 A206WJ
C2737 150P
C2738 150P
C2740 150P
C2741 150P
P2701
NA160WJ
4 LCH(+)
3 LCH(-)
2 RCH(-)
1 RCH(+)
SP To EX SP
GND_B

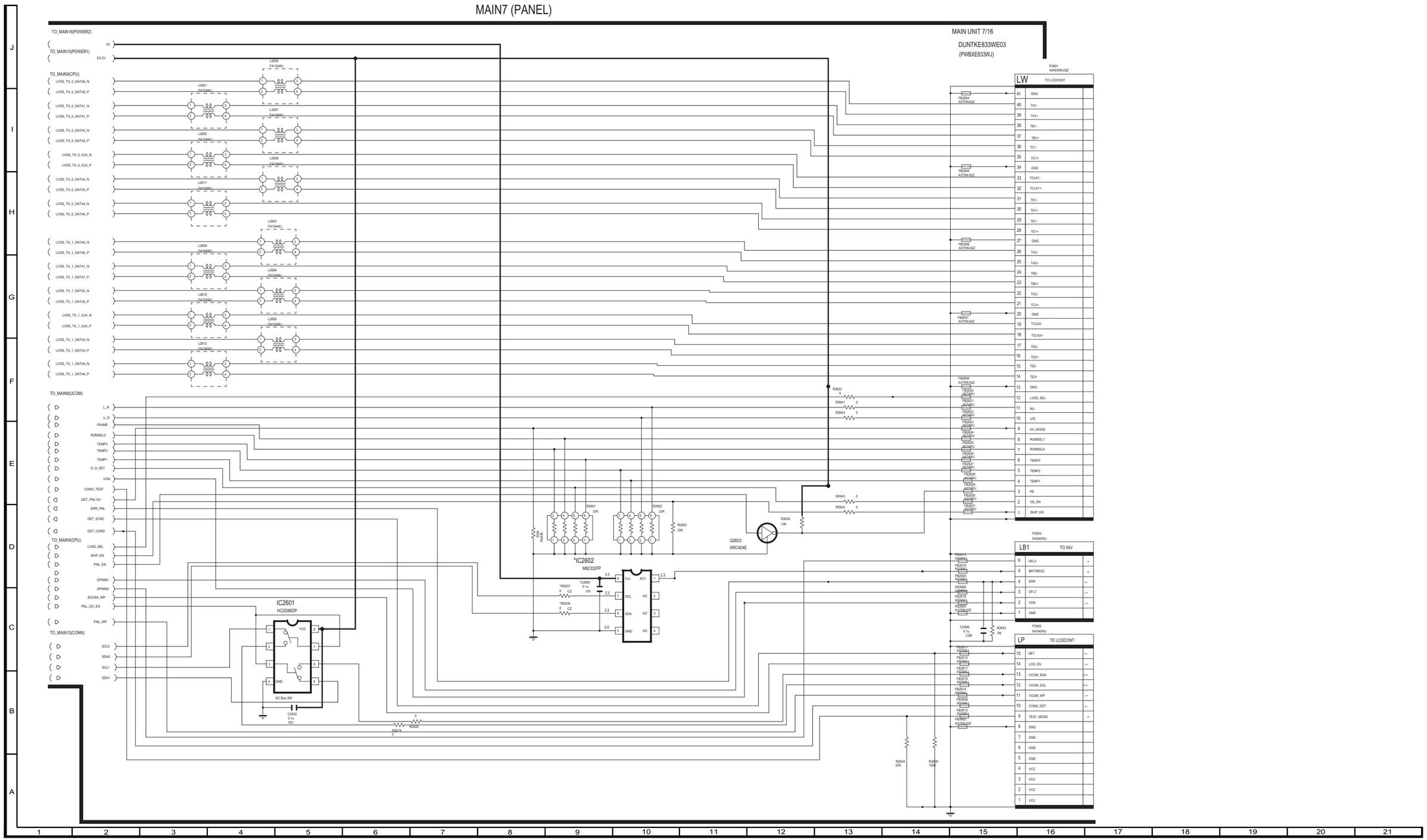
6. MAIN UNIT-5


MAIN5 (HDMI_SW1)
MAIN UNIT 5/16
DUNTKE833WE03
(PWBKE833WJ)
IC1606
TC7SH17FU
IC1607
LCX125FT
IC1603
TC7SH17FU
IC1601
CM1240-8
IC1602
CM1240-8
IC1605
SI9187
Q1610
KTA1505T
Q1609
KRC422S
Q1620
KTA1505T
VS
Q1618
2SC2857
VS2
Q1617
KTC3875GS
VS1
Q1619
KTC3875GS
VS3
TO MAIN7(SP_IF)
TO MAIN6(HDMI-SW2)
TO MAIN5(POWER1)
TO MAIN(CPU)
TO MAIN(UCOM)
TO MAIN3(CONN)
HDMI_SW2_DDCSV_IN
HDMI_SW1_DDCSV_IN
HDMI_SW2_DDCSV_IN2
HDMI_SW1_DDCSV_IN1
HDMI_SW1_DDCSV_IN2
HDMI_HPD_IN2
HDMI_DDC_SCL_IN2
HDMI_DDC_SDA_IN2
TMDS_SW1_CLKN
TMDS_SW1_CLKP
TMDS_SW1_D0N
TMDS_SW1_D0P
TMDS_SW1_D1N
TMDS_SW1_D1P
TMDS_SW1_D2N
TMDS_SW1_D2P
TMDS_SW2_CLKN
TMDS_SW2_CLKP
TMDS_SW2_D0N
TMDS_SW2_D0P
TMDS_SW2_D1N
TMDS_SW2_D1P
TMDS_SW2_D2N
TMDS_SW2_D2P
SC1601
2A-HD6-2SF
SC1602
2A-CT6K2
TMDS Input1
(Side Type)
TMDS Input2
(Side Type)
GND_B

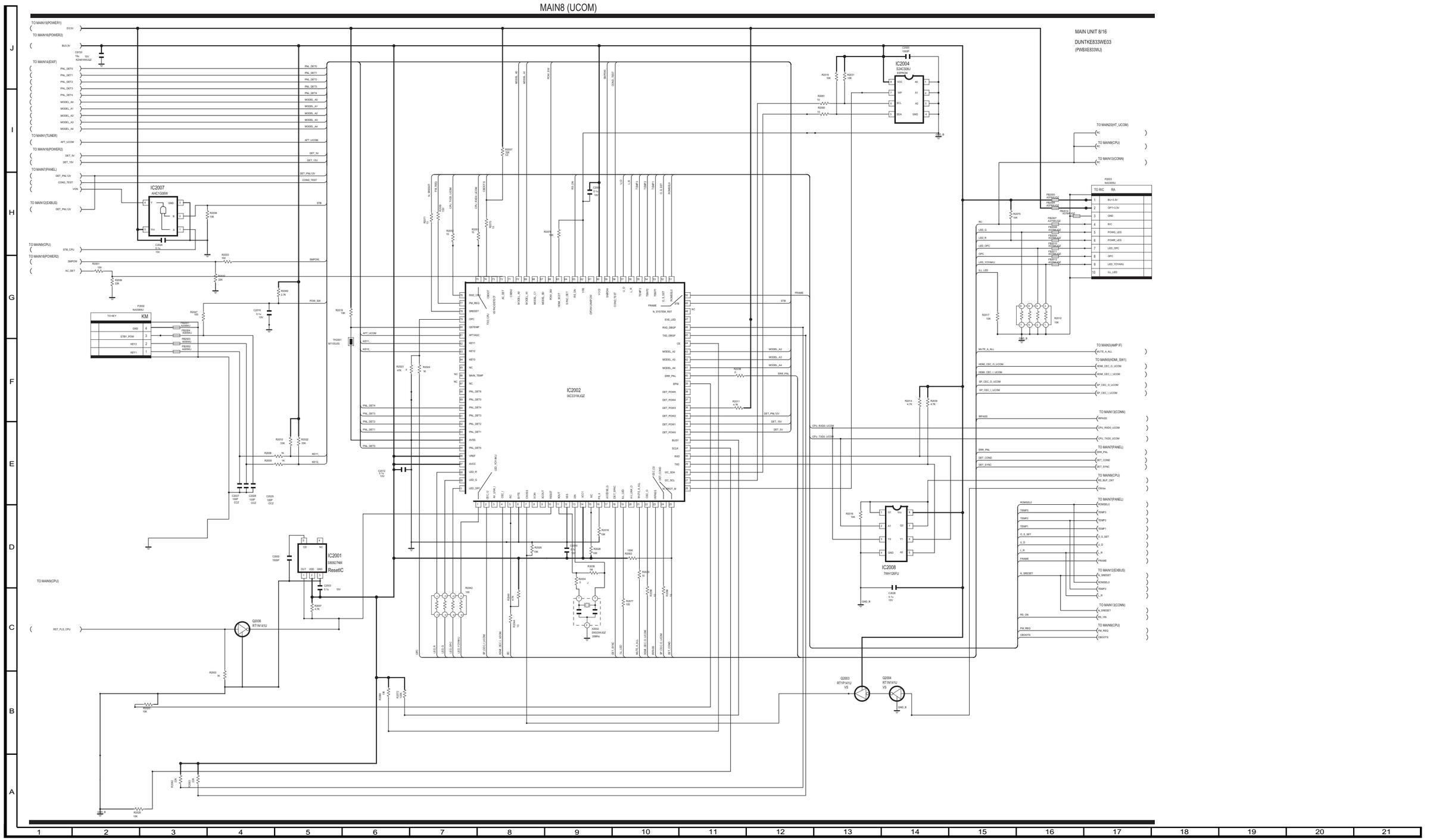
7. MAIN UNIT-6


MAIN6 (HDMI_SW2)
MAIN UNIT-6/16
DUNTKEB333WE03
(PWBMB333WJ)
IC1803
CM12348
IC1804
CM12348
IC1805
CM12348
IC1801
SW197
IC1809
IC1802
LVDS-DUAL INVERTER
Q1856
KTA1505GR
Q1857
KRC103S
Q1862
KTC3265GR
Q1872
KTC3875S
Q1873
KTC3875S
Q1820
2SC2655Y
Q1812
RN483
TO MAIN7(HDMI-SW1)
TO MAIN3(SCONN)
TO MAIN5(POWER)
TO MAIN6(POWER2)
TO MAIN3(CPU)

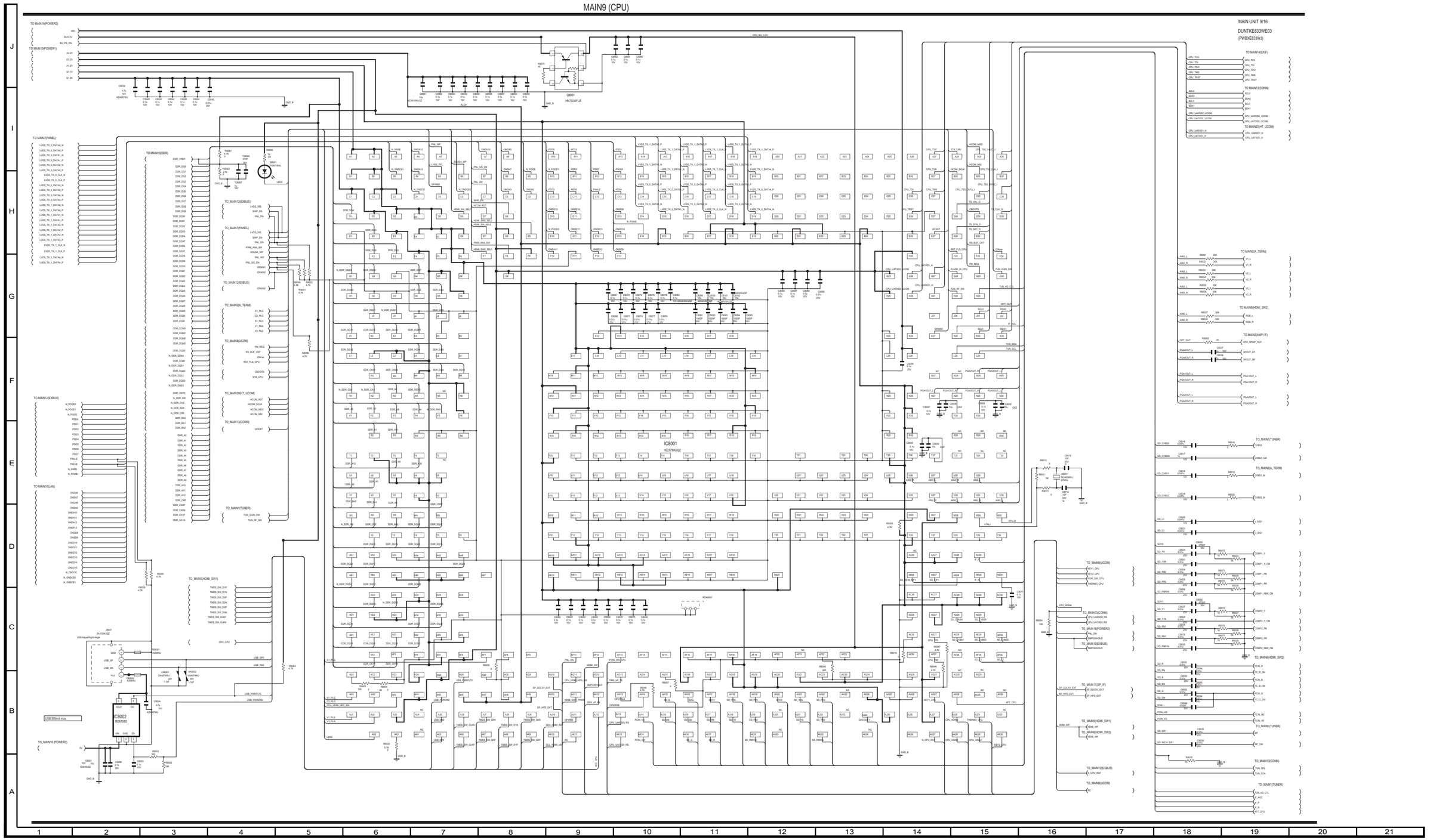
8. MAIN UNIT-7


MAIN7 (PANEL)
MAIN UNIT 7/16
DUNTKE833WE03
(PWBXE833WJ)
TO_MAIN16(POWER2)
5V
TO_MAIN15(POWER1)
D3.3V
TO_MAIN9(CPU)
LVDS_TX_0_DATA0_N
LVDS_TX_0_DATA0_P
LVDS_TX_0_DATA1_N
LVDS_TX_0_DATA1_P
LVDS_TX_0_DATA2_N
LVDS_TX_0_DATA2_P
LVDS_TX_0_CLK_N
LVDS_TX_0_CLK_P
LVDS_TX_0_DATA3_N
LVDS_TX_0_DATA3_P
LVDS_TX_0_DATA4_N
LVDS_TX_0_DATA4_P
LVDS_TX_1_DATA0_N
LVDS_TX_1_DATA0_P
LVDS_TX_1_DATA1_N
LVDS_TX_1_DATA1_P
LVDS_TX_1_DATA2_N
LVDS_TX_1_DATA2_P
LVDS_TX_1_CLK_N
LVDS_TX_1_CLK_P
LVDS_TX_1_DATA3_N
LVDS_TX_1_DATA3_P
LVDS_TX_1_DATA4_N
LVDS_TX_1_DATA4_P
TO_MAIN8(UCOM)
L_R
U_D
FRAME
ROMSEL0
TEMP3
TEMP2
TEMP1
O_S_SET
VON
COND_TEST
DET_PNL12V
ERR_PNL
DET_SYNC
DET_COND
TO_MAIN9(CPU)
LVDS_SEL
SHIP_EN
PNL_EN
OPWM1
OPWM2
SOUSA_WP
PNL_I2C_EN
PNL_WP
TO_MAIN13(CONN)
SCL0
SDA0
SCL1
SDA1
L2606 FA154WJ
L2601 FA154WJ
L2607 FA154WJ
L2602 FA154WJ
L2608 FA154WJ
L2611 FA154WJ
L2603 FA154WJ
L2609 FA154WJ
L2604 FA154WJ
L2610 FA154WJ
L2605 FA154WJ
L2612 FA154WJ
IC2601
HC2G66DP
I2C Bus SW
C2602 0.1u 10V
R2620 0
IQ619 0
R2601 22K
R2602 22K
R2603 22K
R2635 10K
Q2603 KRC404E
*IC2602
M62332FP
*C2609 0.1u 10V
*R2637 0 CZ
*R2638 0 CZ
R2622 0
R2641 0
R2642 0
R2643 0
R2644 0
FB2604 A375WJGZ
FB2605 A375WJGZ
FB2606 A375WJGZ
FB2607 A375WJGZ
FB2608 A375WJGZ
FB2632 A274WJ
FB2631 A274WJ
FB2622 A274WJ
FB2623 A274WJ
FB2624 A274WJ
FB2625 A274WJ
FB2626 A274WJ
FB2627 A274WJ
FB2628 A274WJ
FB2629 A274WJ
FB2630 A274WJ
FB2631 A274WJ
FB2613 A274WJ
FB2619 A274WJ
FB2620 A274WJ
FB2609 A274WJ
FB2618 A274WJ
FB2603 A375WJGZ
C2606 0.1u C28
R2623 1M
FB2610 A274WJ
FB2617 A274WJ
FB2615 A274WJ
FB2614 A274WJ
FB2636 A274WJ
FB2612 A274WJ
FB2637 A375WJGZ
R2604 22K
R2609 100K
P2601 WA4559WJGZ
LW TO LCDCONT
41 GND
40 TA1-
39 TA1+
38 TB1-
37 TB1+
36 TC1-
35 TC1+
34 GND
33 TCLK1-
32 TCLK1+
31 TD1-
30 TD1+
29 TE1-
28 TE1+
27 GND
26 TA2-
25 TA2+
24 TB2-
23 TB2+
22 TC2-
21 TC2+
20 GND
19 TCLK2-
18 TCLK2+
17 TD2-
16 TD2+
15 TE2-
14 TE2+
13 GND
12 LVDS_SEL
11 R/L
10 U/D
9 HV_MODE
8 ROMSEL1
7 ROMSEL0
6 TEMP3
5 TEMP2
4 TEMP1
3 PE
2 OS_EN
1 SHIP_EN
P2603 NA3409WJ
LB1 TO INV
6 OFL2 ->
5 BRT/REG2 ->
4 ERR <-
3 OFL1 ->
2 VON ->
1 GND
P2602 NA3499WJ
LP TO LCDCONT
15 DET <-
14 LCD_EN ->
13 VCOM_SDA <->
12 VCOM_SCL <->
11 VCOM_WP ->
10 COND_DET <-
9 TEST_MODE ->
8 GND
7 GND
6 GND
5 GND
4 VCC
3 VCC
2 VCC
1 VCC

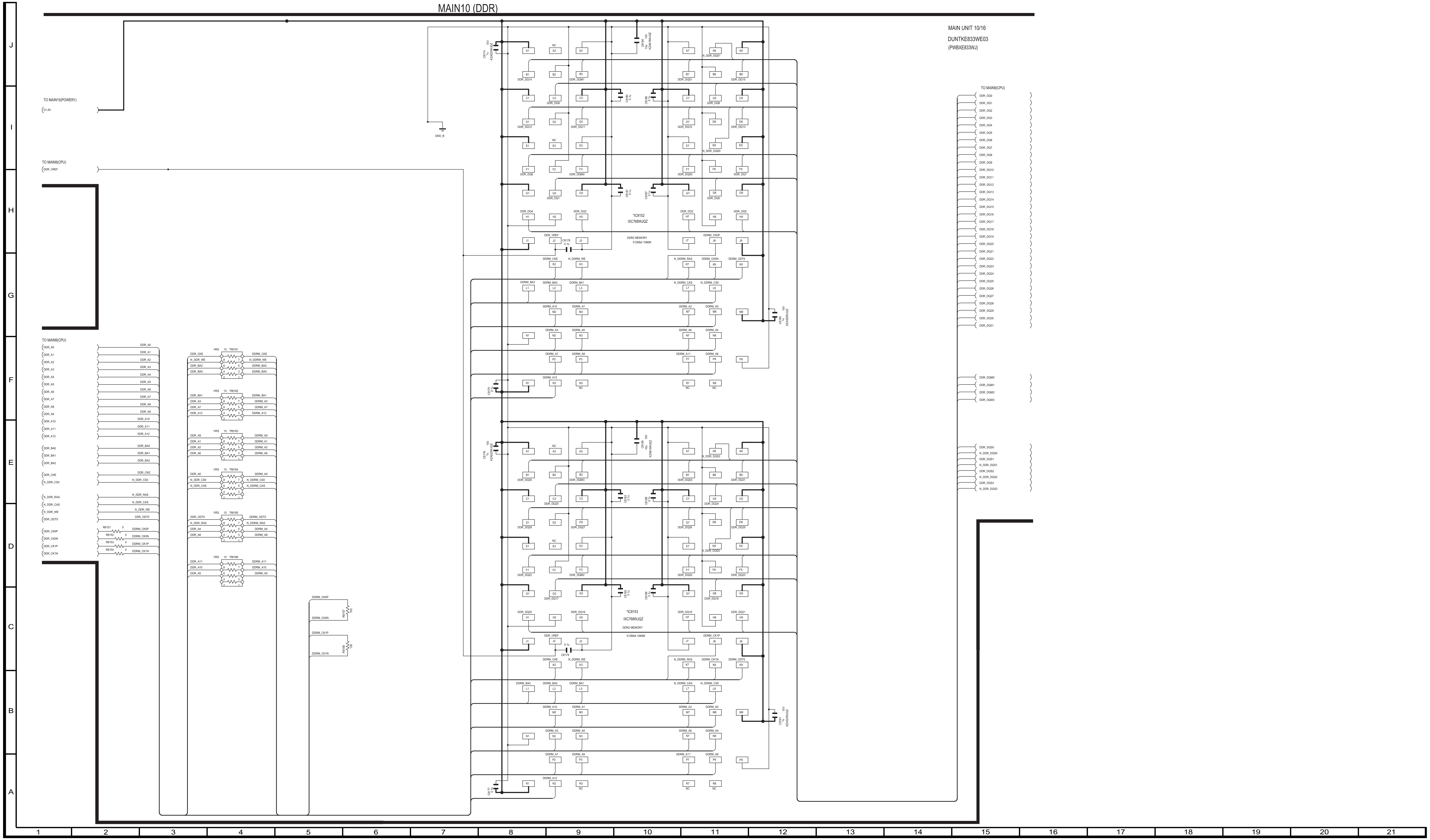
9. MAIN UNIT-8


MAIN8 (UCOM)
MAIN UNIT 8/16
DUNTKE833WE03
(PWBXE833WJ)
IC2007
AHC126RW
IC2004
S24C08UJ
EEPROM
IC2002
0IC33190QZ
IC2001
280927NM
ResetIC
IC2008
74W126FU
TO MAIN5(POWER1)
TO MAIN16(POWER2)
TO MAIN14(EXIF)
TO MAIN1(TUNER)
TO MAIN7(PANEL)
TO MAIN12(EXBUS)
TO MAIN6(CPU)
TO MAIN20(HT_UCOM)
TO MAIN13(CONN)
TO MAIN3(CONN)
TO MAIN(JAMP IF)
TO MAIN5(HDMI_SW1)
TO KEY
KM
P2002
NA2009XJ
P2003
NA3309XJ
Q2006
RT1N141U
Q2003
RT1P141U
Q2004
RT1N141U
V5
V6
GND_B

10. MAIN UNIT-9


MAIN9 (CPU)
MAIN UNIT 9/16
DUNTKE833WE03
(PWBXE833WJ)
IC8001
0IC579WJQZ
C8002
IC0015B0
TO MAIN16(POWER2)
TO MAIN15(POWER1)
TO MAIN18(LAN)
TO MAIN17(PANEL)
TO MAIN19(DDR)
TO MAIN13(EXBUS)
TO MAIN12(EXBUS)
TO MANJA_TERM
TO MAIN(UCOM)
TO MAIN2(HT_UCOM)
TO MAIN3(CONN)
TO MAIN14(EXIF)
TO MAIN(TUNER)
TO MAIN(HDMI_SW2)
TO MAIN(HDMI_SW1)
TO MAIN17(SP_IF)
TO MAIN(AMP I/F)
TO MAIN(UCOM)
TO MAIN(TUNER)
TO MAIN13(CONN)
TO MAIN16(POWER2)
TO MAIN12(EXBUS)
TO MAIN(TUNER)
TO MAIN(TUNER)
TO MAIN(TUNER

11. MAIN UNIT-10


MAIN10 (DDR)
MAIN UNIT 10/16
DUNTKE833WE03
(PWBXE833WJ)
TO MAIN15(POWER1)
D1.8V
GND_B
TO MAIN9(CPU)
DDR_VREF
*IC8152
IXC768WJQZ
DDR2 MEMORY
512Mbit 1066M
*IC8153
IXC768WJQZ
DDR2 MEMORY
512Mbit 1066M
C8174 1u 10V KZA520WJQZ
C8184 10u 10V KZA616WJQZ
C8185 10u 10V KZA616WJQZ
C8176 1u 10V KZA520WJQZ
C8190 1u 10V KZA520WJQZ
C8191 1u 10V KZA520WJQZ
C8175 0.1u
C8177 0.1u
C8178 0.1u
C8179 0.1u
C8180 0.1u
C8181 0.1u
C8182 0.1u
C8183 0.1u
C8186 0.1u
C8187 0.1u
C8188 0.1u
C8189 0.1u
VRS 10 *R8181
VRS 10 *R8182
VRS 10 *R8183
VRS 10 *R8184
VRS 10 *R8185
VRS 10 *R8186
R8151 0
R8152 0
R8153 0
R8154 0
R8157 100
R8158 100
DDR_A0
DDR_A1
DDR_A2
DDR_A3
DDR_A4
DDR_A5
DDR_A6
DDR_A7
DDR_A8
DDR_A9
DDR_A10
DDR_A11
DDR_A12
DDR_BA0
DDR_BA1
DDR_BA2
DDR_CKE
N_DDR_CS0
N_DDR_RAS
N_DDR_CAS
N_DDR_WE
DDR_ODT0
DDR_CK0P
DDR_CK0N
DDR_CK1P
DDR_CK1N
DDRM_CK0P
DDRM_CK0N
DDRM_CK1P
DDRM_CK1N
DDR_DQ0
DDR_DQ1
DDR_DQ2
DDR_DQ3
DDR_DQ4
DDR_DQ5
DDR_DQ6
DDR_DQ7
DDR_DQ8
DDR_DQ9
DDR_DQ10
DDR_DQ11
DDR_DQ12
DDR_DQ13
DDR_DQ14
DDR_DQ15
DDR_DQ16
DDR_DQ17
DDR_DQ18
DDR_DQ19
DDR_DQ20
DDR_DQ21
DDR_DQ22
DDR_DQ23
DDR_DQ24
DDR_DQ25
DDR_DQ26
DDR_DQ27
DDR_DQ28
DDR_DQ29
DDR_DQ30
DDR_DQ31
DDR_DQM0
DDR_DQM1
DDR_DQM2
DDR_DQM3
DDR_DQS0
N_DDR_DQS0
DDR_DQS1
N_DDR_DQS1
DDR_DQS2
N_DDR_DQS2
DDR_DQS3
N_DDR_DQS3
J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
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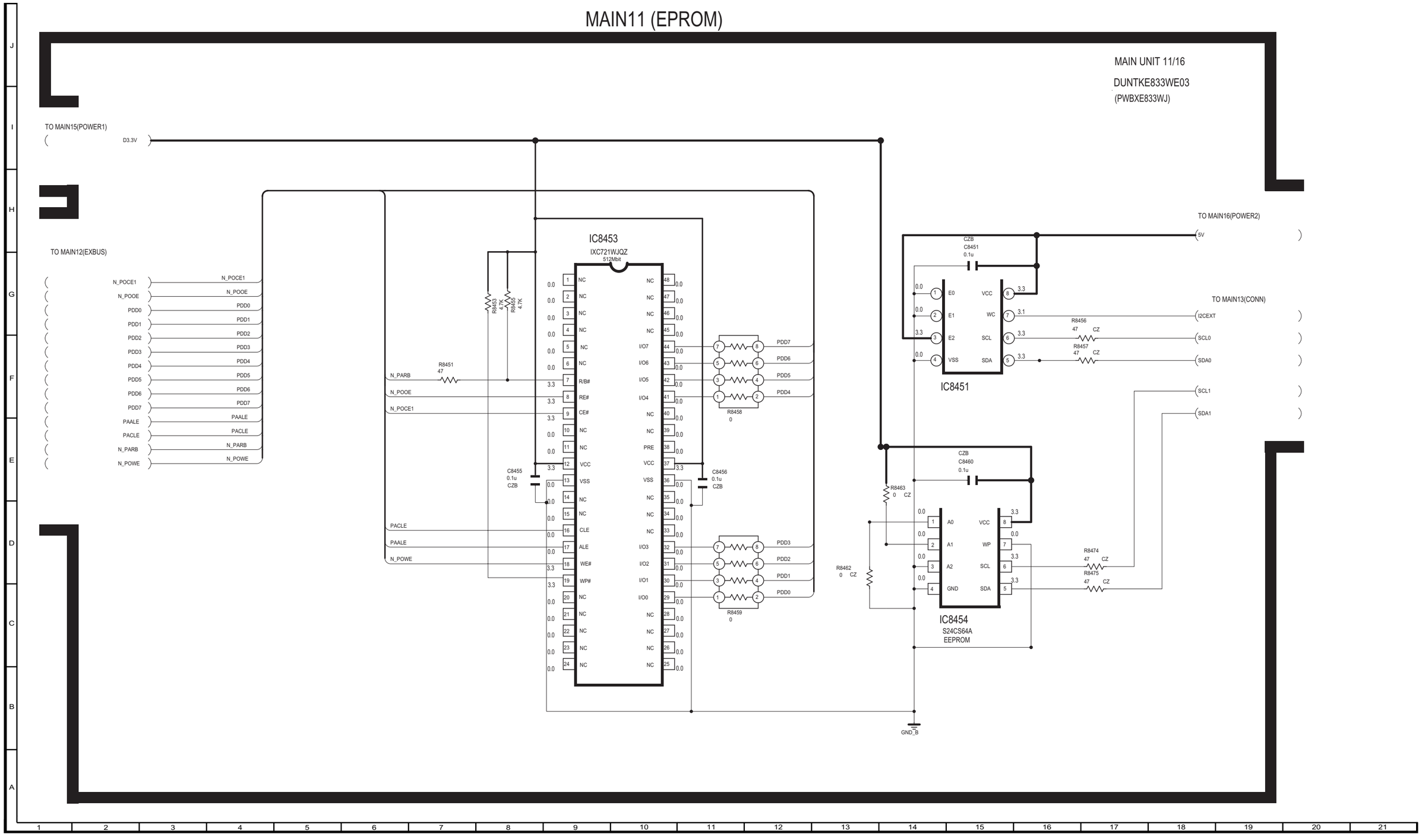
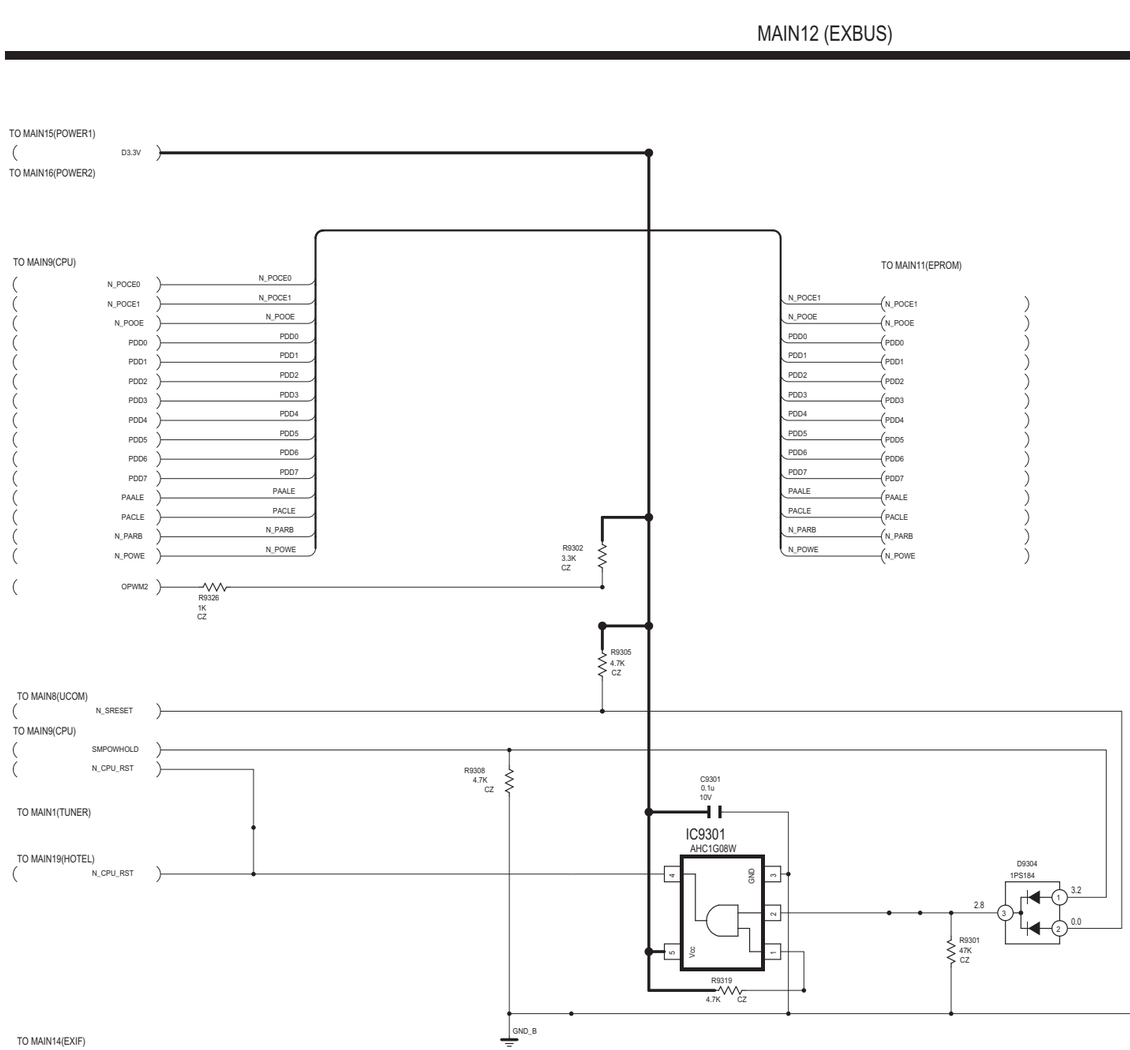
21

12. MAIN UNIT-11

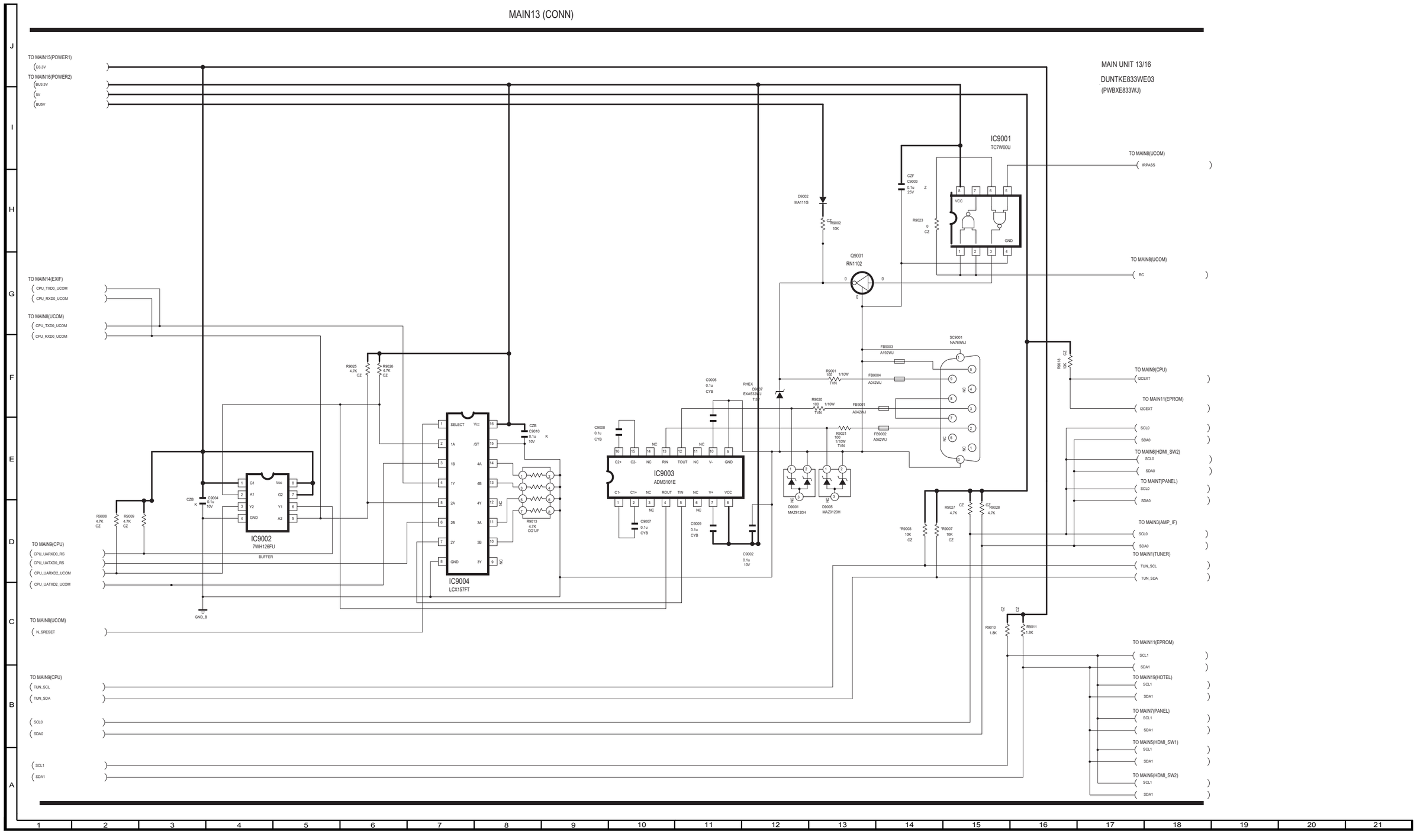


13. MAIN UNIT-12

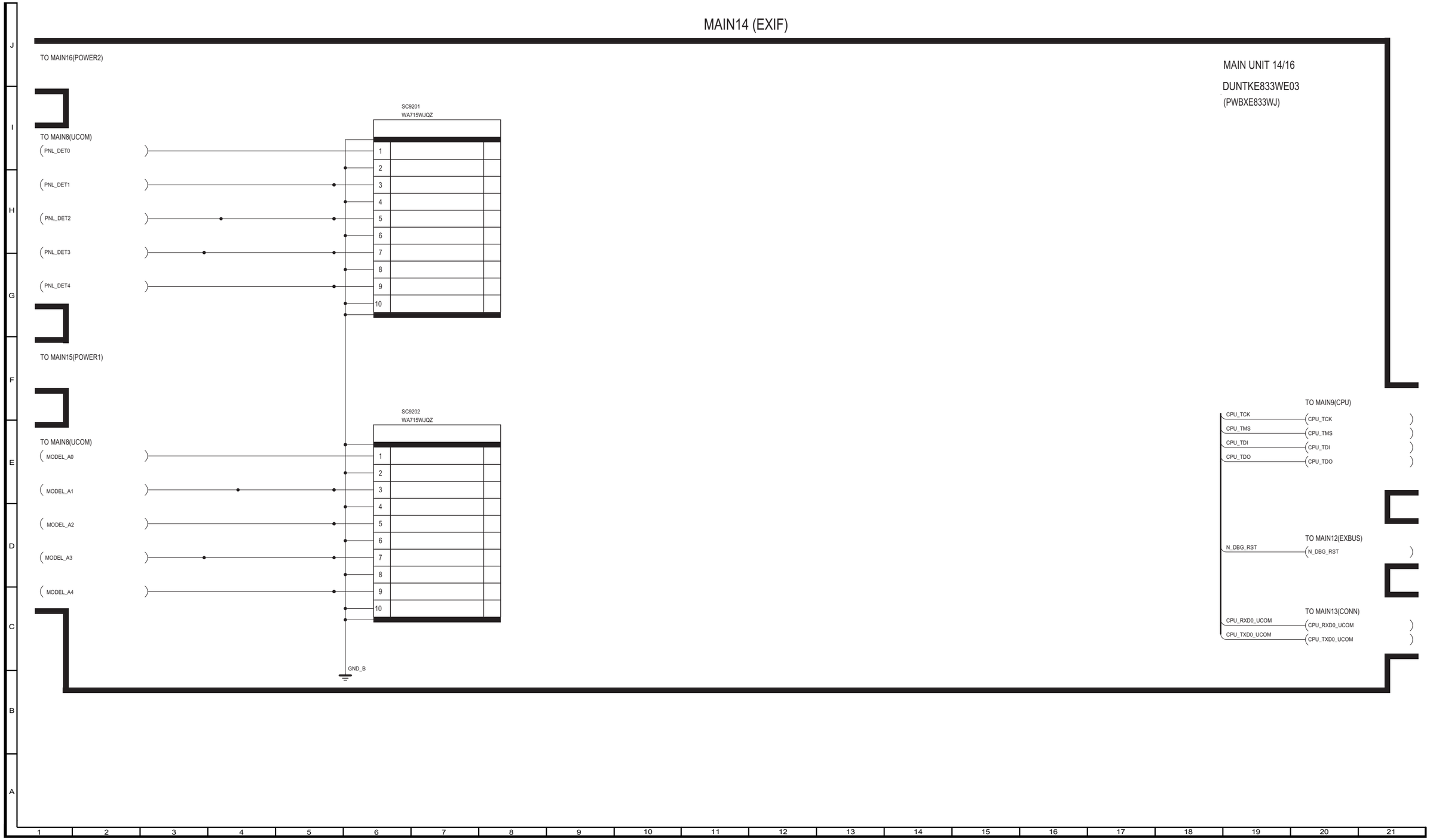
MAIN12 (EXBUS)



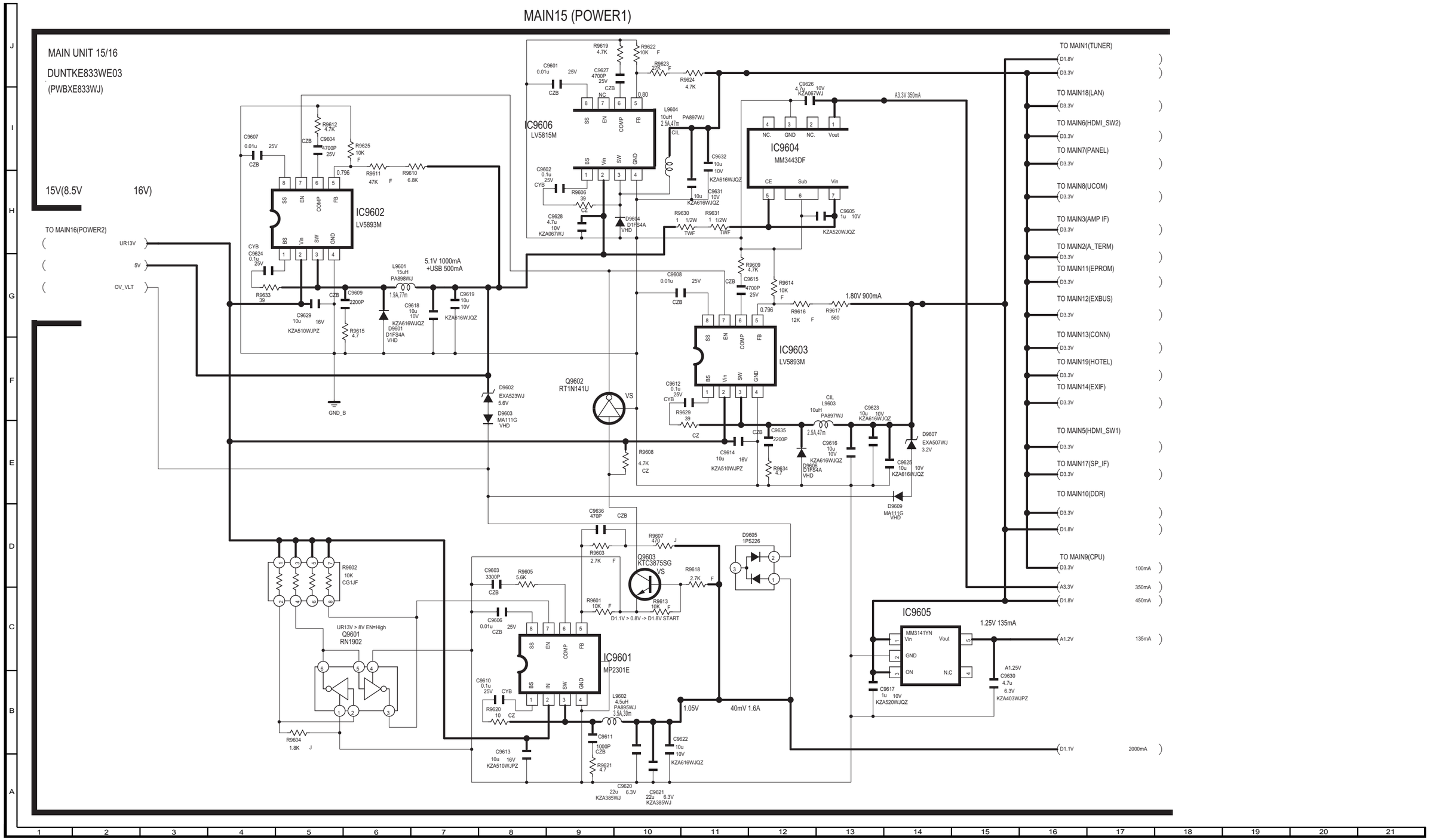
14. MAIN UNIT-13



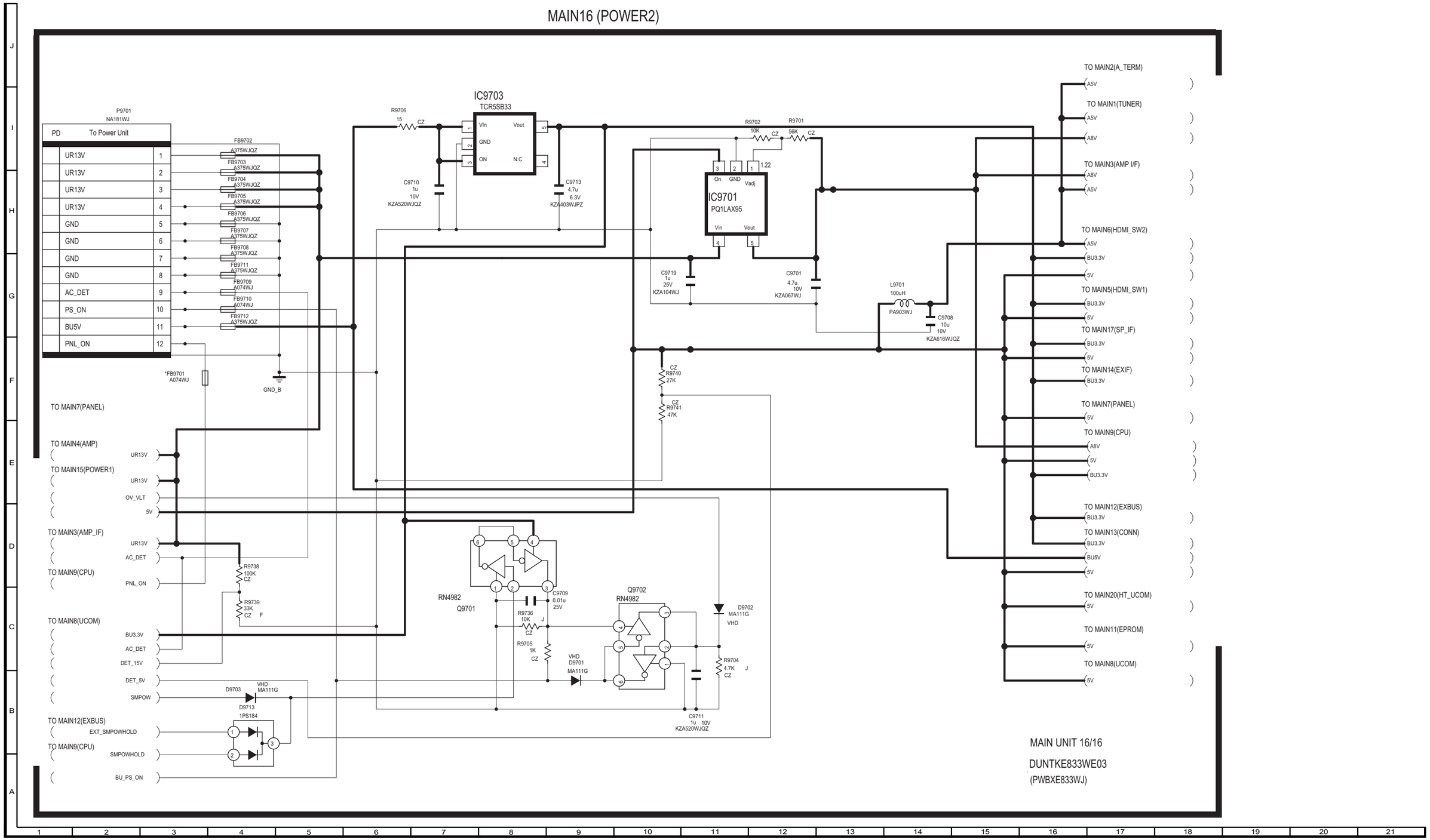
15. MAIN UNIT-14



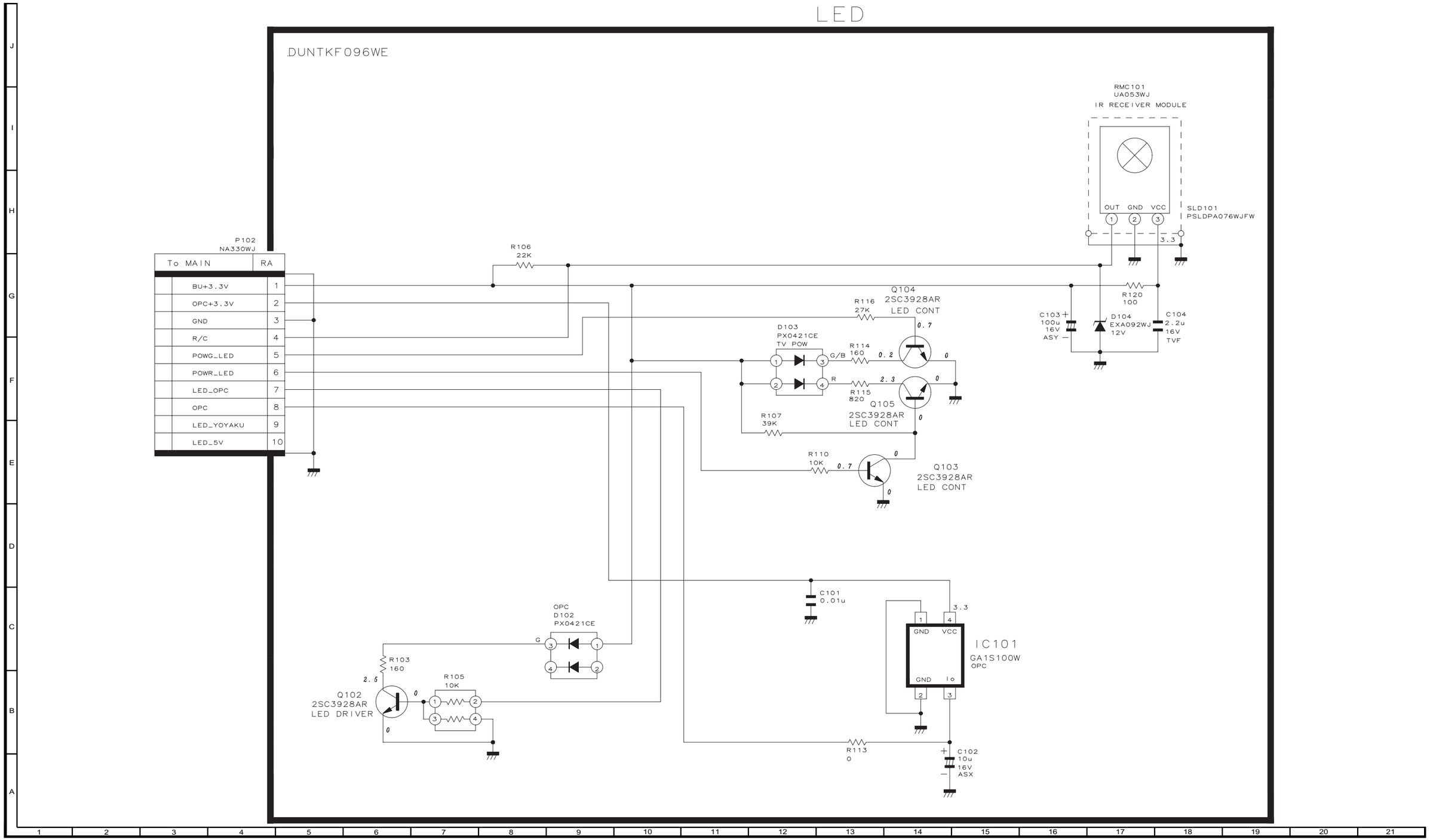
16. MAIN UNIT-15



17. MAIN UNIT-16



18. LED UNIT


LED
DUNTKF096WE
P102
NA330WJ
To MAIN
RA
BU+3.3V 1
OPC+3.3V 2
GND 3
R/C 4
POWG_LED 5
POWR_LED 6
LED_OPC 7
OPC 8
LED_YOYAKU 9
LED_5V 10
R106
22K
RMC101
UA053WJ
IR RECEIVER MODULE
OUT GND VCC
SLD101
PSLDPA076WJFW
3.3
R120
100
C103
100u
16V
ASY
D104
EXA092WJ
12V
C104
2.2u
16V
TVF
Q104
2SC3928AR
LED CONT
R116
27K
D103
PX0421CE
TV POW
G/B
R
R114
160
R115
820
Q105
2SC3928AR
LED CONT
R107
39K
R110
10K
Q103
2SC3928AR
LED CONT
OPC
D102
PX0421CE
R103
160
R105
10K
Q102
2SC3928AR
LED DRIVER
C101
0.01u
IC101
GA1S100W
OPC
GND
VCC
R113
0
C102
10u
16V
ASX

- MEMO -

SHARP PARTS GUIDE

No. S37X3LC46E77U

LCD COLOR TELEVISION

LC-46E77U

MODELS LC-52E77U

Note:
The reference numbers on the PWB are arranged in alphabetical order.

CONTENTS

[1] PRINTED WIRING BOARD ASSEMBLIES

[2] LCD PANEL

[3] DUNTKE266FM02 (KEY Unit)

[4] DUNTKE833FM03 (MAIN Unit)

[5] DUNTKF096FM01 (R/C, LED Unit)

[6] CABINET AND MECHANICAL PARTS (LC-46E77U)

[7] LCD MODULE Assembly (LC-46E77U)

[8] CABINET AND MECHANICAL PARTS (LC-52E77U)

[9] LCD MODULE Assembly (LC-52E77U)

[10] SUPPLIED ACCESSORIES

[11] PACKING PARTS (NOT REPLACEMENT ITEM

[12] SERVICE JIG (USE FOR SERVICING)

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

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The contents are subject to change without notice.

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[1] PRINTED WIRING BOARD ASSEMBLIES					
N	DUNTKE266FM02	AH	N	X	KEY Unit
N	DUNTKE833FM03	CB	N	X	MAIN Unit
N	DUNTKF096FM01	AN	N	X	R/C, LED Unit
N	RDENCA336WJQZ	BR		X	POWER Unit
N	CPWBX4023TPXA	BW	N	J	LCD Control Unit (LC-46E77U)
N	CPWBX4023TPXZ	BW	N	J	LCD Control Unit (LC-52E77U)
N	RUNTKA538WJN1	BF	N	J	INVERTER Unit-1 (LC-46E77U)
N	RUNTKA539WJN1	BF	N	J	INVERTER Unit-2 (LC-46E77U)
N	RUNTKA528WJN1	BF	N	J	INVERTER Unit-1 (LC-52E77U)
N	RUNTKA529WJN1	BF	N	J	INVERTER Unit-2 (LC-52E77U)
N	RUNTKA540WJZZ	AP	N	J	INVERTER GND Unit-1 (LC-46E77U)
N	RUNTKA541WJZZ	AP	N	J	INVERTER GND Unit-2 (LC-46E77U)
N	RUNTKA530WJZZ	AP	N	J	INVERTER GND Unit-1 (LC-52E77U)
N	RUNTKA531WJZZ	AP	N	J	INVERTER GND Unit-2 (LC-52E77U)
[2] LCD PANEL					
N	R1LK460D3LW80Z	EL	N	X	46"LCD Panel Module(LK460D3LW80Z2)
N	R1LK520D3LW80Z	EY	N	X	52"LCD Panel Module(LK520D3LW80Z2)
[3] DUNTKE266FM02 (KEY Unit)					
D151	RH-EX0646GEZZY	AA		J	MTZJT-7215B
D152	RH-EX0646GEZZY	AA		J	MTZJT-7215B
D155	RH-EX0646GEZZY	AA		J	MTZJT-7215B
P151	QPLGNA059WJZZ	AC		J	PLUG
R151	VRD-RA2BE822JY	AA		J	8.2k 1/8W Carbon
R152	VRD-RA2BE123JY	AA		J	12k 1/8W Carbon
R153	VRD-RA2BE822JY	AA		J	8.2k 1/8W Carbon
R154	VRD-RA2BE123JY	AA		J	12k 1/8W Carbon
S151	QSW-K0003AJZZ+	AB		J	SWITCH
S152	QSW-K0003AJZZ+	AB		J	SWITCH
S153	QSW-K0003AJZZ+	AB		J	SWITCH
S154	QSW-K0003AJZZ+	AB		J	SWITCH
S155	QSW-K0003AJZZ+	AB		J	SWITCH
S156	QSW-K0003AJZZ+	AB		J	SWITCH
S157	QSW-K0003AJZZ+	AB		J	SWITCH
[4] DUNTKE833FM03 (MAIN Unit)					
C501	VCKYCY1AB105KY	AB		J	1 10V Ceramic
C503	VCKYCY1AB105KY	AB		J	1 10V Ceramic
C504	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C505	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C506	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C507	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C508	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C509	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C510	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C512	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C514	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C515	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C516	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C517	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C519	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C520	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C521	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C522	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C523	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C525	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C533	VCCCCZ1HH471JY	AA		J	470p 50V Ceramic
C535	VCKYCY1AB105KY	AB		J	1 10V Ceramic
C536	VCCCCZ1HH471JY	AA		J	470p 50V Ceramic
C537	VCCCCZ1HH471JY	AA		J	470p 50V Ceramic
C539	VCCCCZ1HH471JY	AA		J	470p 50V Ceramic
C540	VCKYCY1AB105KY	AB		J	1 10V Ceramic
C555	VCKYCY1AB105KY	AB		J	1 10V Ceramic
C557	VCKYCY1AB105KY	AB		J	1 10V Ceramic
C563	VCKYCY1EB103KY	AA		J	0.01 25V Ceramic
C565	VCKYCZ1EF104ZY	AA		J	0.1 25V Ceramic
C566	RC-KZA403WJPZY	AB		J	CAPACITOR
C569	VCKYCY1AB105KY	AB		J	1 10V Ceramic
C570	VCKYCY1AB105KY	AB		J	1 10V Ceramic
C575	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C576	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C577	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C578	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C579	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C580	VCCCCZ1HH150JY	AB		J	15p 50V Ceramic
C1101	RC-KZA616WJQZY	AB		J	CAPACITOR
C1102	RC-KZA616WJQZY	AB		J	CAPACITOR
C1107	VCKYCZ1HB102KY	AB		J	1000p 50V Ceramic
C1112	RC-KZA510WJPZY	AB		J	CAPACITOR
C1116	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C1119	VCKYCZ1AB473KY	AB		J	0.047 10V Ceramic
C1124	VCKYCZ1EB472KY	AB		J	4700p 25V Ceramic
C1125	VCKYCY1AB105KY	AB		J	1 10V Ceramic
C1126	VCKYCY1EB104KY	AB		J	0.1 25V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE833FM03 (MAIN Unit)					
C1129	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C1130	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C1131	VCAAPE1AJ686MY	AE		J	68 10V Electrolytic
C1134	VCAAPE1AJ686MY	AE		J	68 10V Electrolytic
C1301	VCKYCZ1EF104ZY	AA		J	0.1 25V Ceramic
C1303	RC-KZA616WJQZY	AB		J	CAPACITOR
C1306	VCKYTV1CB105KY	AC		J	1 16V Ceramic
C1307	VCKYTV1CB105KY	AC		J	1 16V Ceramic
C1309	RC-KZA616WJQZY	AB		J	CAPACITOR
C1310	VCKYCZ1EF104ZY	AA		J	0.1 25V Ceramic
C1311	RC-KZA616WJQZY	AB		J	CAPACITOR
C1312	VCKYCZ1EF104ZY	AA		J	0.1 25V Ceramic
C1314	RC-KZA098WJZZY	AD		J	CAPACITOR
C1602	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C1603	RC-KZA520WJQZY	AA		J	CAPACITOR
C1604	VCKYCZ1AB473KY	AB		J	0.047 10V Ceramic
C1605	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C1613	RC-KZA616WJQZY	AB		J	CAPACITOR
C1614	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C1615	VCKYCZ1HB102KY	AB		J	1000p 50V Ceramic
C1616	RC-KZA616WJQZY	AB		J	CAPACITOR
C1617	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C1618	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C1619	VCKYCZ1HB102KY	AB		J	1000p 50V Ceramic
C1620	VCKYCZ1HB102KY	AB		J	1000p 50V Ceramic
C1621	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C1622	VCKYCZ1HB102KY	AB		J	1000p 50V Ceramic
C1623	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C1624	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C1625	RC-KZA520WJQZY	AA		J	CAPACITOR
C1626	RC-KZA520WJQZY	AA		J	CAPACITOR
C1627	RC-KZA520WJQZY	AA		J	CAPACITOR
C1628	RC-KZA520WJQZY	AA		J	CAPACITOR
C1629	RC-KZA520WJQZY	AA		J	CAPACITOR
C1634	RC-KZA616WJQZY	AB		J	CAPACITOR
C1635	VCKYCZ1EB472KY	AB		J	4700p 25V Ceramic
C1801	RC-KZA616WJQZY	AB		J	CAPACITOR
C1802	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C1803	VCKYCZ1HB102KY	AB		J	1000p 50V Ceramic
C1804	RC-KZA616WJQZY	AB		J	CAPACITOR
C1809	VCKYCY1AB105KY	AB		J	1 10V Ceramic
C1810	VCKYCY1AB105KY	AB		J	1 10V Ceramic
C1811	VCCCCZ1HH470JY	AB		J	47p 50V Ceramic
C1812	VCCCCZ1HH470JY	AB		J	47p 50V Ceramic
C1814	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C1815	VCKYCZ1EB472KY	AB		J	4700p 25V Ceramic
C1817	RC-KZA520WJQZY	AA		J	CAPACITOR
C1819	VCKYCZ1AB473KY	AB		J	0.047 10V Ceramic
C1825	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C1826	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C1827	VCKYCZ1HB102KY	AB		J	1000p 50V Ceramic
C1828	VCKYCZ1HB102KY	AB		J	1000p 50V Ceramic
C1829	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C1830	VCKYCZ1HB102KY	AB		J	1000p 50V Ceramic
C1835	RC-KZA520WJQZY	AA		J	CAPACITOR
C1836	RC-KZA520WJQZY	AA		J	CAPACITOR
C1837	RC-KZA520WJQZY	AA		J	CAPACITOR
C1838	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C1842	RC-KZA520WJQZY	AA		J	CAPACITOR
C1849	RC-KZA616WJQZY	AB		J	CAPACITOR
C1850	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C1852	RC-KZA616WJQZY	AB		J	CAPACITOR
C2002	VCKYCZ1HB152KY	AB		J	1500p 50V Ceramic
C2003	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C2008	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C2010	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C2012	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C2016	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C2020	VCKYCZ1HB102KY	AB		J	1000p 50V Ceramic
C2024	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C2026	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C2027	VCCCCZ1HH101JY	AB		J	100p 50V Ceramic
C2028	VCCCCZ1HH101JY	AB		J	100p 50V Ceramic
C2029	VCCCCZ1HH101JY	AB		J	100p 50V Ceramic
C2602	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C2606	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C2609	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C2704	RC-KZA114WJZZY	AB		J	CAPACITOR
C2705	RC-KZA114WJZZY	AB		J	CAPACITOR
C2706	RC-KZA114WJZZY	AB		J	CAPACITOR
C2707	RC-KZA114WJZZY	AB		J	CAPACITOR
C2710	VCERMZ1EN477MY	AE		J	470 25V CAPACITOR(AL)
C2711	VCKYCZ1EF104ZY	AA		J	0.1 25V Ceramic
C2712	RC-KZA616WJQZY	AB		J	CAPACITOR
C2713	VCKYCZ1EF104ZY	AA		J	0.1 25V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE833FM03 (MAIN Unit)					
C2716	RC-KZA114WJZZY	AB		J	CAPACITOR
C2717	RC-KZA114WJZZY	AB		J	CAPACITOR
C2723	RC-KZA114WJZZY	AB		J	CAPACITOR
C2724	RC-KZA114WJZZY	AB		J	CAPACITOR
C2725	VCKYCY1EB104KY	AB		J	0.1 25V Ceramic
C2726	VCKYCY1EB104KY	AB		J	0.1 25V Ceramic
C2727	VCKYCY1EB104KY	AB		J	0.1 25V Ceramic
C2728	VCKYCY1EB104KY	AB		J	0.1 25V Ceramic
C2730	VCKYTV1EB224KY	AA		J	0.22 25V Ceramic
C2731	VCKYTV1EB224KY	AA		J	0.22 25V Ceramic
C2737	VCCCCZ1HH151JY	AB		J	150p 50V Ceramic
C2738	VCCCCZ1HH151JY	AB		J	150p 50V Ceramic
C2740	VCCCCZ1HH151JY	AB		J	150p 50V Ceramic
C2741	VCCCCZ1HH151JY	AB		J	150p 50V Ceramic
C2748	VCCCCZ1HH101JY	AB		J	100p 50V Ceramic
C8001	RC-KZA616WJQZY	AB		J	CAPACITOR
C8002	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8003	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8004	RC-KZA067WJZZY	AB		J	CAPACITOR
C8005	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8006	RC-KZA616WJQZY	AB		J	CAPACITOR
C8007	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8008	RC-KZA616WJQZY	AB		J	CAPACITOR
C8009	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8010	RC-KZA616WJQZY	AB		J	CAPACITOR
C8011	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8012	VCCCCZ1HH120GY	AA		J	12p 50V Ceramic
C8013	VCCCCZ1HH100DY	AB		J	10p 50V Ceramic
C8016	VCKYCZ1AB473KY	AB		J	0.047 10V Ceramic
C8017	RC-KZA531WJQZY	AA		J	CAPACITOR
C8018	VCKYCZ1AB473KY	AB		J	0.047 10V Ceramic
C8019	VCKYCZ1AB473KY	AB		J	0.047 10V Ceramic
C8020	VCKYCZ1AB473KY	AB		J	0.047 10V Ceramic
C8021	VCKYCZ1AB473KY	AB		J	0.047 10V Ceramic
C8022	VCKYCZ1HB472KY	AA		J	4700p 50V Ceramic
C8023	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8024	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8025	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8026	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8027	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8028	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8029	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8030	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8031	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8032	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8033	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8034	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8035	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8036	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8037	VCKYTV1CB105KY	AC		J	1 16V Ceramic
C8038	VCKYTV1CB105KY	AC		J	1 16V Ceramic
C8039	RC-KZA067WJZZY	AB		J	CAPACITOR
C8040	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8041	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8042	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8043	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8044	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8045	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8046	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8051	RC-KZA616WJQZY	AB		J	CAPACITOR
C8052	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8053	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8054	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8055	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8056	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8057	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8058	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8059	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8060	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8061	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8062	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8063	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8064	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8065	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8066	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8067	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8068	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8069	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8070	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8071	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8072	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8073	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8074	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8075	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8076	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE833FM03 (MAIN Unit)					
C8077	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8078	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8079	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8080	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8081	VCKYCZ1HB102KY	AB		J	1000p 50V Ceramic
C8082	VCKYCZ1HB102KY	AB		J	1000p 50V Ceramic
C8083	VCKYCZ1HB102KY	AB		J	1000p 50V Ceramic
C8084	VCKYCZ1HB102KY	AB		J	1000p 50V Ceramic
C8085	VCKYCZ1HB102KY	AB		J	1000p 50V Ceramic
C8086	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8087	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8088	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8089	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8090	VCKYCZ1EF104ZY	AA		J	0.1 25V Ceramic
C8091	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8092	VCKYCZ1HB472KY	AA		J	4700p 50V Ceramic
C8093	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8094	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8095	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C8096	VCKYCZ1HB472KY	AA		J	4700p 50V Ceramic
C8097	VCKYTV1CB105KY	AC		J	1 16V Ceramic
C8098	VCKYCZ1HB471KY	AB		J	470p 50V Ceramic
C8099	RC-KZA616WJQZY	AB		J	CAPACITOR
C8100	RC-KZA616WJQZY	AB		J	CAPACITOR
C8101	RC-KZA616WJQZY	AB		J	CAPACITOR
C8102	RC-KZA616WJQZY	AB		J	CAPACITOR
C8174	RC-KZA520WJQZY	AA		J	CAPACITOR
C8175	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8176	RC-KZA520WJQZY	AA		J	CAPACITOR
C8177	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8178	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8179	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8180	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8181	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8182	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8183	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8184	RC-KZA616WJQZY	AB		J	CAPACITOR
C8185	RC-KZA616WJQZY	AB		J	CAPACITOR
C8186	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8187	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8188	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8189	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8190	RC-KZA520WJQZY	AA		J	CAPACITOR
C8191	RC-KZA520WJQZY	AA		J	CAPACITOR
C8451	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8455	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8456	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C8460	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C9003	VCKYCZ1EF104ZY	AA		J	0.1 25V Ceramic
C9004	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C9006	VCKYCY1EB104KY	AB		J	0.1 25V Ceramic
C9007	VCKYCY1EB104KY	AB		J	0.1 25V Ceramic
C9008	VCKYCY1EB104KY	AB		J	0.1 25V Ceramic
C9009	VCKYCY1EB104KY	AB		J	0.1 25V Ceramic
C9010	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C9301	VCKYCZ1AB104KY	AB		J	0.1 10V Ceramic
C9601	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C9602	VCKYCY1EB104KY	AB		J	0.1 25V Ceramic
C9603	VCKYCZ1HB332KY	AA		J	3300p 50V Ceramic
C9604	VCKYCZ1EB472KY	AB		J	4700p 25V Ceramic
C9605	RC-KZA520WJQZY	AA		J	CAPACITOR
C9606	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C9607	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C9608	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C9609	VCKYCZ1HB222KY	AB		J	2200p 50V Ceramic
C9610	VCKYCY1EB104KY	AB		J	0.1 25V Ceramic
C9611	VCKYCZ1HB102KY	AB		J	1000p 50V Ceramic
C9612	VCKYCY1EB104KY	AB		J	0.1 25V Ceramic
C9613	RC-KZA510WJPZY	AB		J	CAPACITOR
C9614	RC-KZA510WJPZY	AB		J	CAPACITOR
C9615	VCKYCZ1EB472KY	AB		J	4700p 25V Ceramic
C9616	RC-KZA616WJQZY	AB		J	CAPACITOR
C9617	RC-KZA520WJQZY	AA		J	CAPACITOR
C9618	RC-KZA616WJQZY	AB		J	CAPACITOR
C9619	RC-KZA616WJQZY	AB		J	CAPACITOR
C9620	RC-KZA385WJZZY	AD		J	CAPACITOR
C9621	RC-KZA385WJZZY	AD		J	CAPACITOR
C9622	RC-KZA616WJQZY	AB		J	CAPACITOR
C9623	RC-KZA616WJQZY	AB		J	CAPACITOR
C9624	VCKYCY1EB104KY	AB		J	0.1 25V Ceramic
C9625	RC-KZA616WJQZY	AB		J	CAPACITOR
C9626	RC-KZA067WJZZY	AB		J	CAPACITOR
C9627	VCKYCZ1EB472KY	AB		J	4700p 25V Ceramic
C9628	RC-KZA067WJZZY	AB		J	CAPACITOR
C9629	RC-KZA510WJPZY	AB		J	CAPACITOR

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE833FM03 (MAIN Unit)					
C9630	RC-KZA403WJPZY	AB		J	CAPACITOR
C9631	RC-KZA616WJQZY	AB		J	CAPACITOR
C9632	RC-KZA616WJQZY	AB		J	CAPACITOR
C9635	VCKYCZ1HB222KY	AB		J	2200p 50V Ceramic
C9636	VCKYCZ1HB471KY	AB		J	470p 50V Ceramic
C9701	RC-KZA067WJZZY	AB		J	CAPACITOR
C9708	RC-KZA616WJQZY	AB		J	CAPACITOR
C9709	VCKYCZ1EB103KY	AA		J	0.01 25V Ceramic
C9710	RC-KZA520WJQZY	AA		J	CAPACITOR
C9711	RC-KZA520WJQZY	AA		J	CAPACITOR
C9713	RC-KZA403WJPZY	AB		J	CAPACITOR
C9719	RC-KZA104WJZZY	AA		J	CAPACITOR
C9720	RC-KZA616WJQZY	AB		J	CAPACITOR
D531	VHDMAZ9120H-1Y	AC		J	MAZ91200H0L
D532	VHDMAZ9120H-1Y	AC		J	MAZ91200H0L
D1301	VHDKDS4148/-1Y	AA		J	KDS4148U-RTK/P
D1302	VHD1SS361//-1Y	AB		J	1SS361(T5L,F,T)
D1305	VHD1SS361//-1Y	AB		J	1SS361(T5L,F,T)
D1306	VHPGPFSV51M-1	AG		J	PHOTODIODE
D1307	VHD1SS361//-1Y	AB		J	1SS361(T5L,F,T)
D1310	VHD1SS361//-1Y	AB		J	1SS361(T5L,F,T)
D1311	RH-EXA523WJZZY	AB		J	MAZ8056GML
D1312	VHD1SS361//-1Y	AB		J	1SS361(T5L,F,T)
D1601	VHDRB520S30-1Y	AC		J	RB520S-30TE61
D1602	VHD1PS226++-1Y	AB		J	1PS226,115
D1603	VHD1PS226++-1Y	AB		J	1PS226,115
D1606	RH-EXA523WJZZY	AB		J	MAZ8056GML
D1607	VHD1PS226++-1Y	AB		J	1PS226,115
D1608	VHDMA152WK/-1Y	AB		J	MA152WK-(TX)
D1609	VHDMA152WK/-1Y	AB		J	MA152WK-(TX)
D1610	VHD1PS226++-1Y	AB		J	1PS226,115
D1804	VHDMA152WK/-1Y	AB		J	MA152WK-(TX)
D1805	VHDMA152WK/-1Y	AB		J	MA152WK-(TX)
D1806	RH-EXA523WJZZY	AB		J	MAZ8056GML
D1807	RH-EXA523WJZZY	AB		J	MAZ8056GML
D1808	VHDMAZ9120H-1Y	AC		J	MAZ91200H0L
D1809	VHDMAZ9120H-1Y	AC		J	MAZ91200H0L
D1810	VHDMAZ9120H-1Y	AC		J	MAZ91200H0L
D1811	VHDMA152WK/-1Y	AB		J	MA152WK-(TX)
D1812	VHD1PS226++-1Y	AB		J	1PS226,115
D1813	VHD1PS226++-1Y	AB		J	1PS226,115
D1814	VHDMA152WK/-1Y	AB		J	MA152WK-(TX)
D1815	VHD1PS226++-1Y	AB		J	1PS226,115
D1816	VHD1PS226++-1Y	AB		J	1PS226,115
D1817	VHD1PS226++-1Y	AB		J	1PS226,115
D1818	VHD1PS226++-1Y	AB		J	1PS226,115
D1819	VHD1PS226++-1Y	AB		J	1PS226,115
D1820	VHD1PS226++-1Y	AB		J	1PS226,115
D2504	VHDRB520S30-1Y	AC		J	RB520S-30TE61
D2505	VHDMA152WK/-1Y	AB		J	MA152WK-(TX)
D8001	RH-PXA018WJZZY	AC		J	GM1HD55200A
D9001	VHDMAZ9120H-1Y	AC		J	MAZ91200H0L
D9002	VHDMA111G++-1Y	AA		J	MA2J1110GL
D9005	VHDMAZ9120H-1Y	AC		J	MAZ91200H0L
D9007	RH-EXA532WJZZY	AA		J	MAZ8075GML
D9304	VHD1PS184++-1Y	AB		J	1PS184,115
D9601	VHDD1FS4A++-1Y	AC		J	D1FS4A-5063
D9602	RH-EXA523WJZZY	AB		J	MAZ8056GML
D9603	VHDMA111G++-1Y	AA		J	MA2J1110GL
D9604	VHDD1FS4A++-1Y	AC		J	D1FS4A-5063
D9605	VHD1PS226++-1Y	AB		J	1PS226,115
D9606	VHDD1FS4A++-1Y	AC		J	D1FS4A-5063
D9607	RH-EXA507WJZZY	AA		J	MAZ8033GLL
D9609	VHDMA111G++-1Y	AA		J	MA2J1110GL
D9701	VHDMA111G++-1Y	AA		J	MA2J1110GL
D9702	VHDMA111G++-1Y	AA		J	MA2J1110GL
D9703	VHDMA111G++-1Y	AA		J	MA2J1110GL
D9713	VHD1PS184++-1Y	AB		J	1PS184,115
FB502	RBLN-A204WJZZY	AA		J	BALUN
FB505	RBLN-A045WJZZY	AB		J	BALUN
FB506	RBLN-A045WJZZY	AB		J	BALUN
FB507	RBLN-A204WJZZY	AA		J	BALUN
FB508	RBLN-A204WJZZY	AA		J	BALUN
FB509	RBLN-A204WJZZY	AA		J	BALUN
FB510	RBLN-A204WJZZY	AA		J	BALUN
FB511	RBLN-A045WJZZY	AB		J	BALUN
FB512	RBLN-A045WJZZY	AB		J	BALUN
FB513	RBLN-A204WJZZY	AA		J	BALUN
FB515	RBLN-A204WJZZY	AA		J	BALUN
FB516	RBLN-A204WJZZY	AA		J	BALUN
FB517	RBLN-A045WJZZY	AB		J	BALUN
FB518	RBLN-A045WJZZY	AB		J	BALUN
FB520	RBLN-A204WJZZY	AA		J	BALUN
FB521	RBLN-A204WJZZY	AA		J	BALUN
FB522	RBLN-A045WJZZY	AB		J	BALUN

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE833FM03 (MAIN Unit)					
FB523	RBLN-A045WJZZY	AB		J	BALUN
FB1101	RBLN-A206WJZZY	AA		J	BALUN
FB1102	RBLN-A206WJZZY	AA		J	BALUN
FB1605	RBLN-A192WJZZY	AA		J	BALUN
FB1802	RBLN-A045WJZZY	AB		J	BALUN
FB1803	RBLN-A045WJZZY	AB		J	BALUN
FB1804	RBLN-0093GEZZY	AB		J	BALUN
FB1805	RBLN-0093GEZZY	AB		J	BALUN
FB1806	RBLN-0093GEZZY	AB		J	BALUN
FB1807	RBLN-A204WJZZY	AA		J	BALUN
FB1808	RBLN-A204WJZZY	AA		J	BALUN
FB1812	RBLN-A192WJZZY	AA		J	BALUN
FB2001	RBLN-A206WJZZY	AA		J	BALUN
FB2002	RBLN-A005WJZZY	AA		J	BALUN
FB2003	RBLN-A005WJZZY	AA		J	BALUN
FB2004	RBLN-A005WJZZY	AA		J	BALUN
FB2005	RBLN-A378WJQZY	AA		J	BALUN
FB2006	RBLN-A378WJQZY	AA		J	BALUN
FB2007	RBLN-A375WJQZY	AA		J	BALUN
FB2008	RBLN-A375WJQZY	AA		J	BALUN
FB2009	RBLN-A375WJQZY	AA		J	BALUN
FB2010	RBLN-A375WJQZY	AA		J	BALUN
FB2011	RBLN-A375WJQZY	AA		J	BALUN
FB2012	RBLN-A375WJQZY	AA		J	BALUN
FB2014	RBLN-A378WJQZY	AA		J	BALUN
FB2508	RBLN-A192WJZZY	AA		J	BALUN
FB2602	RBLN-A375WJQZY	AA		J	BALUN
FB2603	RBLN-A375WJQZY	AA		J	BALUN
FB2604	RBLN-A375WJQZY	AA		J	BALUN
FB2605	RBLN-A375WJQZY	AA		J	BALUN
FB2606	RBLN-A375WJQZY	AA		J	BALUN
FB2607	RBLN-A375WJQZY	AA		J	BALUN
FB2608	RBLN-A375WJQZY	AA		J	BALUN
FB2609	RBLN-A204WJZZY	AA		J	BALUN
FB2610	RBLN-A074WJZZY	AA		J	BALUN
FB2611	RBLN-A074WJZZY	AA		J	BALUN
FB2612	RBLN-A074WJZZY	AA		J	BALUN
FB2613	RBLN-A204WJZZY	AA		J	BALUN
FB2614	RBLN-A074WJZZY	AA		J	BALUN
FB2616	RBLN-A074WJZZY	AA		J	BALUN
FB2617	RBLN-A074WJZZY	AA		J	BALUN
FB2618	RBLN-A074WJZZY	AA		J	BALUN
FB2619	RBLN-A074WJZZY	AA		J	BALUN
FB2620	RBLN-A074WJZZY	AA		J	BALUN
FB2621	RBLN-A074WJZZY	AA		J	BALUN
FB2622	RBLN-A074WJZZY	AA		J	BALUN
FB2623	RBLN-A074WJZZY	AA		J	BALUN
FB2624	RBLN-A074WJZZY	AA		J	BALUN
FB2625	RBLN-A074WJZZY	AA		J	BALUN
FB2626	RBLN-A074WJZZY	AA		J	BALUN
FB2627	RBLN-A074WJZZY	AA		J	BALUN
FB2628	RBLN-A074WJZZY	AA		J	BALUN
FB2629	RBLN-A074WJZZY	AA		J	BALUN
FB2630	RBLN-A074WJZZY	AA		J	BALUN
FB2631	RBLN-A074WJZZY	AA		J	BALUN
FB2632	RBLN-A074WJZZY	AA		J	BALUN
FB2638	RBLN-A074WJZZY	AA		J	BALUN
FB2702	RBLN-A206WJZZY	AA		J	BALUN
FB2703	RBLN-A206WJZZY	AA		J	BALUN
FB2704	RBLN-A206WJZZY	AA		J	BALUN
FB2705	RBLN-A206WJZZY	AA		J	BALUN
FB2706	RBLN-A206WJZZY	AA		J	BALUN
FB8001	RBLN-A206WJZZY	AA		J	BALUN
FB8002	RBLN-A206WJZZY	AA		J	BALUN
FB9001	RBLN-A042WJZZY	AB		J	BALUN
FB9002	RBLN-A042WJZZY	AB		J	BALUN
FB9003	RBLN-A192WJZZY	AA		J	BALUN
FB9004	RBLN-A042WJZZY	AB		J	BALUN
FB9701	RBLN-A074WJZZY	AA		J	BALUN
FB9702	RBLN-A375WJQZY	AA		J	BALUN
FB9703	RBLN-A375WJQZY	AA		J	BALUN
FB9704	RBLN-A375WJQZY	AA		J	BALUN
FB9705	RBLN-A375WJQZY	AA		J	BALUN
FB9706	RBLN-A375WJQZY	AA		J	BALUN
FB9707	RBLN-A375WJQZY	AA		J	BALUN
FB9708	RBLN-A375WJQZY	AA		J	BALUN
FB9709	RBLN-A074WJZZY	AA		J	BALUN
FB9710	RBLN-A074WJZZY	AA		J	BALUN
FB9711	RBLN-A375WJQZY	AA		J	BALUN
FB9712	RBLN-A375WJQZY	AA		J	BALUN
IC1301	VHiLA79200V-1Y	AF		J	LA79200V-TLM-E
IC1304	VHiAHC1G08W-1Y	AD		J	74AHC1G08GW/G,125
IC1601	VHiCM123408-1Y	AE		J	CM1234-08DE
IC1602	VHiCM123408-1Y	AE		J	CM1234-08DE
IC1603	VHiTC7SH17U-1Y	AC		J	TC7SH17FU(TE85L,F)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE833FM03 (MAIN Unit)					
IC1605	VHiSii9187+-1Q	AN		J	SiI9187CNU
IC1606	VHiTC7SH17U-1Y	AC		J	TC7SH17FU(TE85L,F)
IC1607	VHiLCX125FT-1Y	AD		J	TC74LCX125FT(EL,K)
IC1801	VHiSii9187+-1Q	AN		J	SiI9187CNU
IC1802	VHiLVC2G14G-1Y	AD		J	74LVC2G14GW,125
IC1803	VHiCM123408-1Y	AE		J	CM1234-08DE
IC1804	VHiCM123408-1Y	AE		J	CM1234-08DE
IC1805	VHiCM123408-1Y	AE		J	CM1234-08DE
IC1809	VHiS24CS02J-1Y	AD		J	S-24CS02AFJ-TB-G
IC2001	VHiS80927NM-1Y	AC		J	S-80927CNMC-G8XT2G
IC2002	RH-iXC331WJNQQ			J	MONITOR MICON
IC2004	VHiS24CS08J-1Y	AE		J	S-24CS08AFJ-TB-1G
IC2007	VHiAHC1G08W-1Y	AD		J	74AHC1G08GW/G,125
IC2008	VHi7WH126FU-1Y	AE		J	TC7WH126FU(TE12L,F)
IC2601	VHiHC2G66DP-1Y	AD		J	74HC2G66DP,125
IC2602	VHiM62332FP-1Y	AL		J	M62332FPCF5J
IC2701	VHiYDA148QZ-1Y	AL	N	J	YDA148-QZE2
IC8001	RH-iXC579WJQZQ	BL	N	J	MT5391UFMJ
IC8002	VHiBD6538G+-1Y	AD		J	BD6538G-TR
IC8152	RH-iXC768WJQZQ	AU	N	X	H5PS5162FFR-G7C
IC8153	RH-iXC768WJQZQ	AU	N	X	H5PS5162FFR-G7C
IC8451	RH-iXC622WJQZY	AF	N	J	24LC04BT-I/SN-MT
IC8453	RH-iXC721WJN1Q	AU	N	J	PROGRAM IC
IC8454	VHiS24CS64A-1Y	AF		J	S-24CS64AOI-J8T1G
IC9001	VHiTC7W00U/-1Y	AE		J	TC7W00FU(TE12L,F)
IC9002	VHi7WH126FU-1Y	AE		J	TC7WH126FU(TE12L,F)
IC9003	VHiADM3101E-1Y	AF		J	ADM3101EARQZ-REEL
IC9004	VHiLCX157FT-1Y	AD		J	TC74LCX157FT(EKJ)
IC9301	VHiAHC1G08W-1Y	AD		J	74AHC1G08GW/G,125
IC9601	VHiMP2301E+-1Y	AF		J	MP2301ENE-LF-Z
IC9602	VHiLV5893M+-1Y	AE		J	LV5893M-TE-L-E
IC9603	VHiLV5893M+-1Y	AE		J	LV5893M-TE-L-E
IC9604	VHiMM3443DF-1Y	AD		J	MM3443DFBE
IC9605	VHiMM3141YN-1Y	AC		J	MM3141YNRE
IC9606	VHiLV5815M+-1Y	AF		J	LV5815M-TE-L-E
IC9701	VHiPQ1LAX95-1Y	AD		J	PQ1LAX95MSPQ
IC9703	VHiTCR5SB33-1Y	AC		J	TCR5SB33(TE85L,F)
J501	QJAKGA079WJZZ	AD		J	JACK
J502	QJAKGA108WJZZ	AE		J	JACK
J503	QJAKFA039WJZZ	AD		J	JACK
J504	QSOCDA035WJZZ	AD		J	SOCKET
J505	QJAKFA039WJZZ	AD		J	JACK
J507	QJAKGA109WJZZ	AE		J	JACK
J508	QJAKGA108WJZZ	AE		J	JACK
J1801	QJAKEA103WJZZ	AD	N	J	JACK
J8001	QSOCZA172WJQZ	AD		J	SOCKET
L501	VPMTNR15JR25NY	AB		J	Peaking 0.15µH
L502	VPMTNR15JR25NY	AB		J	Peaking 0.15µH
L503	VPMTNR15JR25NY	AB		J	Peaking 0.15µH
L504	VPMTNR15JR25NY	AB		J	Peaking 0.15µH
L505	VPMTNR15JR25NY	AB		J	Peaking 0.15µH
L506	VPMTNR15JR25NY	AB		J	Peaking 0.15µH
L1106	VPCEM100MR70NY	AC		J	Peaking 10µH
L1301	VPCEM100MR70NY	AC		J	Peaking 10µH
L1601	RCiLFA116WJZZY	AE		J	COIL
L1602	RCiLFA116WJZZY	AE		J	COIL
L1603	RCiLFA116WJZZY	AE		J	COIL
L1604	RCiLFA116WJZZY	AE		J	COIL
L1802	RCiLFA116WJZZY	AE		J	COIL
L1803	RCiLFA116WJZZY	AE		J	COIL
L1804	RCiLFA116WJZZY	AE		J	COIL
L1805	RCiLFA116WJZZY	AE		J	COIL
L2601	RCiLFA154WJZZY	AC		J	COIL
L2602	RCiLFA154WJZZY	AC		J	COIL
L2603	RCiLFA154WJZZY	AC		J	COIL
L2604	RCiLFA154WJZZY	AC		J	COIL
L2605	RCiLFA154WJZZY	AC		J	COIL
L2606	RCiLFA154WJZZY	AC		J	COIL
L2607	RCiLFA154WJZZY	AC		J	COIL
L2608	RCiLFA154WJZZY	AC		J	COIL
L2609	RCiLFA154WJZZY	AC		J	COIL
L2610	RCiLFA154WJZZY	AC		J	COIL
L2611	RCiLFA154WJZZY	AC		J	COIL
L2612	RCiLFA154WJZZY	AC		J	COIL
L2701	RCiLPA343WJPZY	AD		J	COIL
L2702	RCiLPA343WJPZY	AD		J	COIL
L2703	RCiLPA343WJPZY	AD		J	COIL
L2704	RCiLPA343WJPZY	AD		J	COIL
L9601	RCiLPA898WJZZY	AC		J	COIL
L9602	RCiLPA895WJZZY	AD		J	COIL
L9603	RCiLPA897WJZZY	AD		J	COIL
L9604	RCiLPA897WJZZY	AD		J	COIL
L9701	RCiLPA903WJZZY	AC		J	COIL
LUG1101	QLUGHA006WJZZY	AC		J	LUG
LUG1102	QLUGHA006WJZZY	AC		J	LUG

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE833FM03 (MAIN Unit)					
LUG1103	QLUGHA006WJZZY	AC		J	LUG
LUG1104	QLUGHA006WJZZY	AC		J	LUG
LUG1105	QLUGHA006WJZZY	AC		J	LUG
LUG1106	QLUGHA006WJZZY	AC		J	LUG
LUG1107	QLUGHA006WJZZY	AC		J	LUG
LUG1108	QLUGHA006WJZZY	AC		J	LUG
LUG1109	QLUGHA006WJZZY	AC		J	LUG
LUG1110	QLUGHA006WJZZY	AC		J	LUG
LUG1114	QLUGHA006WJZZY	AC		J	LUG
LUG1115	QLUGHA006WJZZY	AC		J	LUG
P2002	QPLGNA338WJZZY	AD		J	PLUG
P2003	QPLGNA330WJZZY	AD		J	PLUG
P2601	QCNCWA659WJQZY	AH		J	CONNECTOR
P2602	QPLGNA349WJZZY	AE		J	PLUG
P2603	QPLGNA340WJZZY	AC		J	PLUG
P2701	QPLGNA160WJZZY	AD		J	PLUG
P9701	QPLGNA181WJZZY	AF		J	PLUG
Q519	VSKTC3875SG-1Y	AB		J	Transistor
Q520	VSKTC3875SG-1Y	AB		J	Transistor
Q1101	VSKTC3875SG-1Y	AB		J	Transistor
Q1102	VSKTC3875SG-1Y	AB		J	Transistor
Q1104	VSHN7G04FUA-1Y	AB	N	J	HN7G04FU-A(TE85L,F
Q1304	VSKRC404E++-1Y	AB		J	KRC404E-RTK
Q1305	VSKRC404E++-1Y	AB		J	KRC404E-RTK
Q1306	VSiMH23T110-1Y	AC		J	IMH23T110
Q1307	VSKTA1504SG-1Y	AA		J	Transistor
Q1309	VSKTC3875SG-1Y	AB		J	Transistor
Q1310	VSKTA1504SG-1Y	AA		J	Transistor
Q1311	VSiMH23T110-1Y	AC		J	IMH23T110
Q1312	VSKRC404E++-1Y	AB		J	KRC404E-RTK
Q1609	VSKRC402E++-1Y	AB		J	Transistor
Q1610	VSKTA1535T+-1Y	AC		J	KTA1535T-RTK/P
Q1617	VSKTC3875SG-1Y	AB		J	Transistor
Q1618	VS2SC3265Y+-1Y	AC	N	J	2SC3265-Y(TE85L,F)
Q1619	VSKTC3875SG-1Y	AB		J	Transistor
Q1620	VSKTA1504SG-1Y	AA		J	Transistor
Q1804	VSKRC402E++-1Y	AB		J	Transistor
Q1808	VSKTA1535T+-1Y	AC		J	KTA1535T-RTK/P
Q1812	VSRN4983///-1Y	AC		J	RN4983(TE85L,F)
Q1819	VSKTC3875SG-1Y	AB		J	Transistor
Q1820	VS2SC3265Y+-1Y	AC	N	J	2SC3265-Y(TE85L,F)
Q1821	VSKTC3875SG-1Y	AB		J	Transistor
Q1822	VSKTA1504SG-1Y	AA		J	Transistor
Q2003	VSRT1P141U/-1Y	AB		J	RT1P141U-T111-1
Q2004	VSRT1N141U/-1Y	AB		J	RT1N141U-T111-1
Q2006	VSRT1N141U/-1Y	AB		J	RT1N141U-T111-1
Q2603	VSKRC404E++-1Y	AB		J	KRC404E-RTK
Q2704	VSKRC404E++-1Y	AB		J	KRC404E-RTK
Q8001	VSHN7G04FUA-1Y	AB	N	J	HN7G04FU-A(TE85L,F
Q9001	VSRN1102///-1Y	AB		J	RN1102(TE85L,F)
Q9601	VSRN1902///-1Y	AC		J	RN1902(TE85L,F)/(T5L,F,T)
Q9602	VSRT1N141U/-1Y	AB		J	RT1N141U-T111-1
Q9603	VSKTC3875SG-1Y	AB		J	Transistor
Q9701	VSRN4982///-1Y	AB		J	RN4982(TE85L,F)
Q9702	VSRN4982///-1Y	AB		J	RN4982(TE85L,F)
R509	VRS-CZ1JF221JY	AA		J	220 1/16W Metal Oxide
R510	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R511	VRS-CZ1JF221JY	AA		J	220 1/16W Metal Oxide
R512	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R514	VRS-CZ1JF102JY	AA		J	1k 1/16W Metal Oxide
R515	VRS-TV1JD750JY	AA		J	75 1/16W Metal Oxide
R526	VRS-CZ1JF102JY	AA		J	1k 1/16W Metal Oxide
R535	VRS-CZ1JF221JY	AA		J	220 1/16W Metal Oxide
R536	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R537	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R538	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R539	VRS-CZ1JF221JY	AA		J	220 1/16W Metal Oxide
R540	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R543	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R544	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R545	VRS-CZ1JF102JY	AA		J	1k 1/16W Metal Oxide
R546	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R547	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R549	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R552	VRS-CZ1JF221JY	AA		J	220 1/16W Metal Oxide
R554	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R555	VRS-CZ1JF221JY	AA		J	220 1/16W Metal Oxide
R558	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R559	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R561	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R569	VRS-TV1JD750JY	AA		J	75 1/16W Metal Oxide
R572	VRS-CZ1JF102JY	AA		J	1k 1/16W Metal Oxide
R573	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R574	VRS-TV1JD750JY	AA		J	75 1/16W Metal Oxide
R579	VRS-CZ1JF221JY	AA		J	220 1/16W Metal Oxide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE833FM03 (MAIN Unit)					
R580	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R581	VRS-CZ1JF221JY	AA		J	220 1/16W Metal Oxide
R582	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R588	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R589	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R590	VRS-CZ1JF102JY	AA		J	1k 1/16W Metal Oxide
R591	VRS-TV1JD750JY	AA		J	75 1/16W Metal Oxide
R592	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R596	VRS-TV1JD471JY	AA		J	470 1/16W Metal Oxide
R597	VRS-TV1JD471JY	AA		J	470 1/16W Metal Oxide
R601	VRS-CZ1JF470JY	AA		J	47 1/16W Metal Oxide
R602	VRS-CZ1JF470JY	AA		J	47 1/16W Metal Oxide
R1101	VRS-CZ1JF470JY	AA		J	47 1/16W Metal Oxide
R1102	VRS-CZ1JF470JY	AA		J	47 1/16W Metal Oxide
R1103	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1105	VRS-CZ1JF471JY	AA		J	470 1/16W Metal Oxide
R1107	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1109	VRS-CZ1JF331JY	AA		J	330 1/16W Metal Oxide
R1113	VRS-CZ1JF123FY	AA		J	12k 1/16W Metal Oxide
R1114	VRS-CZ1JF392JY	AA		J	3.9k 1/16W Metal Oxide
R1115	VRS-CZ1JF101JY	AA		J	100 1/16W Metal Oxide
R1118	VRS-CZ1JF272FY	AA		J	2.7k 1/16W Metal Oxide
R1119	VRS-CZ1JF182JY	AA		J	1.8k 1/16W Metal Oxide
R1120	VRS-CZ1JF222JY	AA		J	2.2k 1/16W Metal Oxide
R1121	VRS-CZ1JF101JY	AA		J	100 1/16W Metal Oxide
R1124	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1125	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R1127	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1128	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R1130	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1133	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1134	VRS-CY1JF000JY	AA		J	0 1/16W Metal Oxide
R1135	VRS-CY1JF000JY	AA		J	0 1/16W Metal Oxide
R1136	VRS-CZ1JF101JY	AA		J	100 1/16W Metal Oxide
R1137	VRS-CZ1JF101JY	AA		J	100 1/16W Metal Oxide
R1138	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1139	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1140	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1301	VRS-CJ1JF470JY	AA		J	47 1/16W Metal Oxide
R1302	VRS-CG1JF202JY	AA	N	J	2k 1/16W Metal Oxide
R1305	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1308	VRS-CZ1JF222JY	AA		J	2.2k 1/16W Metal Oxide
R1310	VRS-CZ1JF102JY	AA		J	1k 1/16W Metal Oxide
R1311	VRS-CZ1JF220JY	AA		J	22 1/16W Metal Oxide
R1314	VRS-CZ1JF473FY	AA		J	47k 1/16W Metal Oxide
R1315	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R1317	VRS-CZ1JF102JY	AA		J	1k 1/16W Metal Oxide
R1318	VRS-CZ1JF102JY	AA		J	1k 1/16W Metal Oxide
R1321	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1322	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1323	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R1325	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1326	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1328	VRS-CG1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R1329	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1330	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1333	VRS-CZ1JF223JY	AA		J	22k 1/16W Metal Oxide
R1334	VRS-CZ1JF102JY	AA		J	1k 1/16W Metal Oxide
R1335	VRS-CZ1JF562JY	AA		J	5.6k 1/16W Metal Oxide
R1337	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R1338	VRS-CZ1JF332JY	AA		J	3.3k 1/16W Metal Oxide
R1339	VRS-CZ1JF222JY	AA		J	2.2k 1/16W Metal Oxide
R1340	VRS-CY1JF564JY	AA		J	560k 1/16W Metal Oxide
R1341	VRS-CZ1JF153JY	AA		J	15k 1/16W Metal Oxide
R1342	VRS-CY1JF564JY	AA		J	560k 1/16W Metal Oxide
R1343	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1344	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R1345	VRS-CZ1JF153JY	AA		J	15k 1/16W Metal Oxide
R1602	VRS-CZ1JF273JY	AA		J	27k 1/16W Metal Oxide
R1603	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1606	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R1609	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1610	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R1612	VRS-CZ1JF101JY	AA		J	100 1/16W Metal Oxide
R1613	VRS-CZ1JF274JY	AA		J	270k 1/16W Metal Oxide
R1614	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R1615	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1616	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1617	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1618	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1619	VRS-CZ1JF1R0JY	AA		J	1 1/16W Metal Oxide
R1620	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1621	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1638	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R1639	VRS-CZ1JF331JY	AA		J	330 1/16W Metal Oxide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE833FM03 (MAIN Unit)					
R1640	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R1641	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1642	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1644	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1645	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1646	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R1651	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1652	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1653	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1654	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1655	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1656	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1657	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1658	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1660	VRS-CZ1JF222JY	AA		J	2.2k 1/16W Metal Oxide
R1663	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R1665	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R1668	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1669	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1670	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1671	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1672	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1685	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R1686	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R1687	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R1688	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R1689	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R1690	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1692	VRS-CZ1JF471JY	AA		J	470 1/16W Metal Oxide
R1693	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R1801	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1802	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1806	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1807	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1808	VRS-CZ1JF101JY	AA		J	100 1/16W Metal Oxide
R1809	VRS-CZ1JF274JY	AA		J	270k 1/16W Metal Oxide
R1810	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R1811	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1812	VRS-CZ1JF471JY	AA		J	470 1/16W Metal Oxide
R1813	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R1814	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R1815	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R1816	VRS-CZ1JF221JY	AA		J	220 1/16W Metal Oxide
R1817	VRS-CZ1JF221JY	AA		J	220 1/16W Metal Oxide
R1818	VRS-CZ1JF222JY	AA		J	2.2k 1/16W Metal Oxide
R1819	VRS-CZ1JF222JY	AA		J	2.2k 1/16W Metal Oxide
R1820	VRS-CZ1JF101JY	AA		J	100 1/16W Metal Oxide
R1821	VRS-CZ1JF101JY	AA		J	100 1/16W Metal Oxide
R1822	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1823	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1824	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1825	VRS-TV1JD750JY	AA		J	75 1/16W Metal Oxide
R1826	VRS-TV1JD750JY	AA		J	75 1/16W Metal Oxide
R1827	VRS-TV1JD750JY	AA		J	75 1/16W Metal Oxide
R1828	VRS-CZ1JF330JY	AA		J	33 1/16W Metal Oxide
R1838	VRS-CZ1JF330JY	AA		J	33 1/16W Metal Oxide
R1842	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1846	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1847	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1848	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1849	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1850	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1851	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R1852	VRS-CZ1JF331JY	AA		J	330 1/16W Metal Oxide
R1853	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R1854	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1855	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1856	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1857	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1858	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1859	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R1861	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R1862	VRS-CZ1JF1R0JY	AA		J	1 1/16W Metal Oxide
R1864	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1865	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1866	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1867	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1868	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1869	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1870	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1871	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1872	VRS-CZ1JF222JY	AA		J	2.2k 1/16W Metal Oxide
R1881	VRS-CZ1JF470JY	AA		J	47 1/16W Metal Oxide
R1882	VRS-CZ1JF470JY	AA		J	47 1/16W Metal Oxide
R1883	VRS-CZ1JF470JY	AA		J	47 1/16W Metal Oxide

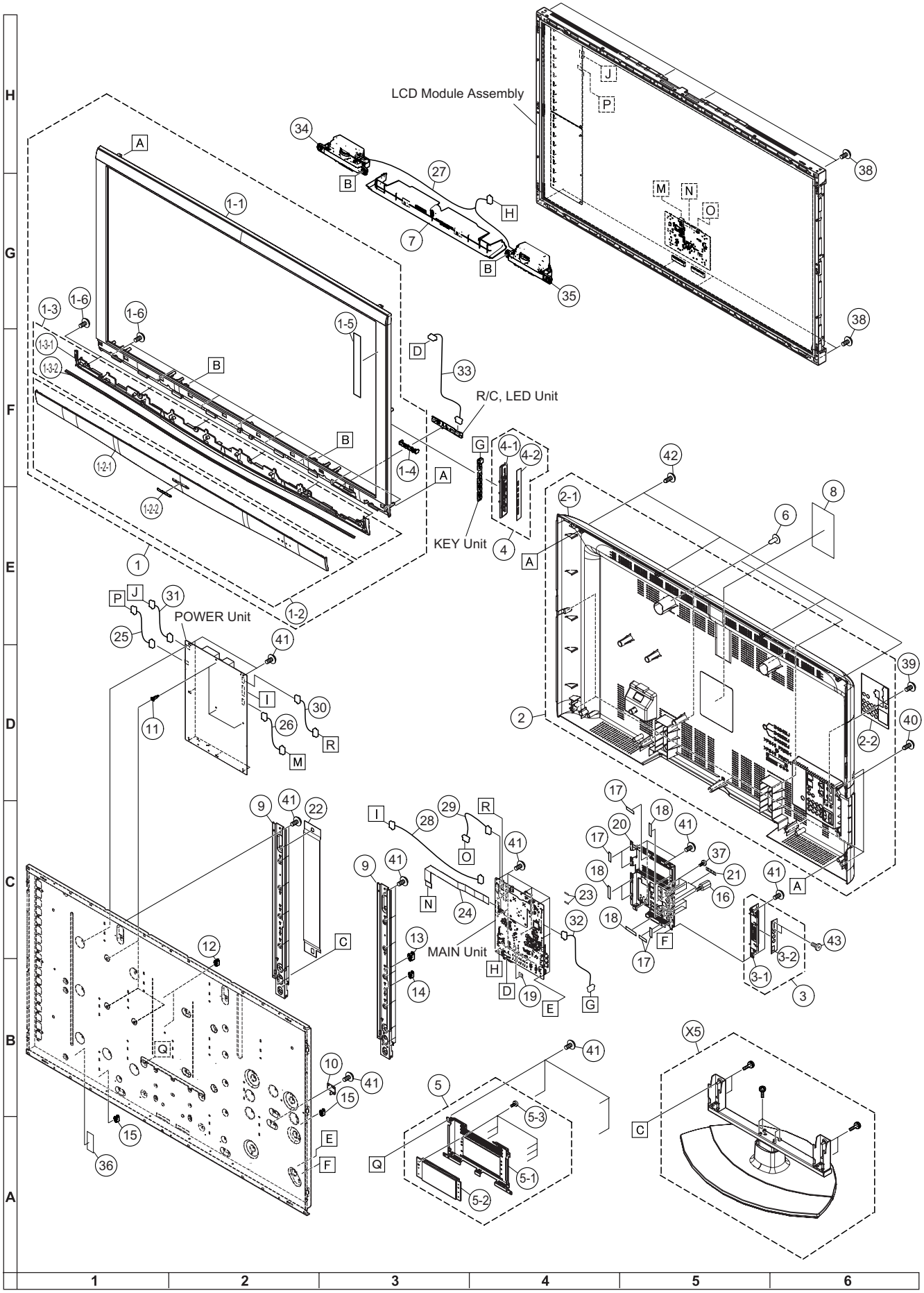
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE833FM03 (MAIN Unit)					
R1885	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1887	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1888	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1889	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1899	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R1900	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1901	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R1916	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R1917	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R1918	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R1919	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R1920	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R2001	VRS-CZ1JF101JY	AA		J	100 1/16W Metal Oxide
R2002	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R2003	VRS-CZ1JF102JY	AA		J	1k 1/16W Metal Oxide
R2004	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R2006	VRS-CZ1JF223JY	AA		J	22k 1/16W Metal Oxide
R2007	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R2008	VRS-CZ1JF102JY	AA		J	1k 1/16W Metal Oxide
R2009	VRS-CZ1JF102JY	AA		J	1k 1/16W Metal Oxide
R2010	VRS-CZ1JF333JY	AA		J	33k 1/16W Metal Oxide
R2011	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R2012	VRS-CH1JF103JY	AA		J	10k 1/16W Metal Oxide
R2014	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R2015	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R2016	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R2017	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R2018	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R2019	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R2020	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R2022	VRS-CZ1JF333JY	AA		J	33k 1/16W Metal Oxide
R2023	VRS-CZ1JF473FY	AA		J	47k 1/16W Metal Oxide
R2024	VRS-CZ1JF102JY	AA		J	1k 1/16W Metal Oxide
R2025	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R2026	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R2028	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R2029	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R2030	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R2031	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R2032	VRS-CZ1JF223JY	AA		J	22k 1/16W Metal Oxide
R2033	VRS-CZ1JF101JY	AA		J	100 1/16W Metal Oxide
R2034	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R2036	VRS-CZ1JF105JY	AA		J	1M 1/16W Metal Oxide
R2038	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R2042	VRS-CH1JF101JY	AA		J	100 1/16W Metal Oxide
R2044	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R2047	VRS-CZ1JF101JY	AA		J	100 1/16W Metal Oxide
R2048	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R2049	VRS-CZ1JF272FY	AA		J	2.7k 1/16W Metal Oxide
R2050	VRS-CZ1JF101JY	AA		J	100 1/16W Metal Oxide
R2051	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R2052	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R2057	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R2058	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R2060	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R2061	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R2062	VRS-CZ1JF223JY	AA		J	22k 1/16W Metal Oxide
R2063	VRS-CZ1JF223JY	AA		J	22k 1/16W Metal Oxide
R2064	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R2068	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R2070	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R2071	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R2072	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R2075	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R2077	VRS-CZ1JF101JY	AA		J	100 1/16W Metal Oxide
R2078	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R2505	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R2506	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R2507	VRS-CZ1JF273JY	AA		J	27k 1/16W Metal Oxide
R2601	VRS-CH1JF223JY	AA		J	22k 1/16W Metal Oxide
R2602	VRS-CH1JF223JY	AA		J	22k 1/16W Metal Oxide
R2603	VRS-CZ1JF223JY	AA		J	22k 1/16W Metal Oxide
R2604	VRS-CZ1JF223JY	AA		J	22k 1/16W Metal Oxide
R2619	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R2620	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R2622	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R2623	VRS-CZ1JF105JY	AA		J	1M 1/16W Metal Oxide
R2635	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R2636	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R2637	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R2638	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R2639	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R2641	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R2642	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R2643	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE833FM03 (MAIN Unit)					
R2644	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R2715	VRS-CZ1JF224FY	AA		J	220k 1/16W Metal Oxide
R2717	VRS-CZ1JF273FY	AA		J	27k 1/16W Metal Oxide
R2719	VRS-CZ1JF562JY	AA		J	5.6k 1/16W Metal Oxide
R2726	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R2731	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R2741	VRS-CZ1JF753JY	AA		J	75k 1/16W Metal Oxide
R2742	VRS-CZ1JF273JY	AA		J	27k 1/16W Metal Oxide
R2744	VRS-CZ1JF220JY	AA		J	22 1/16W Metal Oxide
R2752	VRS-CZ1JF224FY	AA		J	220k 1/16W Metal Oxide
R2753	VRS-CZ1JF683FY	AA		J	68k 1/16W Metal Oxide
R2754	VRS-CZ1JF223FY	AA		J	22k 1/16W Metal Oxide
R8001	VRS-CZ1JF101JY	AA		J	100 1/16W Metal Oxide
R8002	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R8003	VRS-CZ1JF101FY	AA		J	100 1/16W Metal Oxide
R8004	VRS-CZ1JF390FY	AA		J	39 1/16W Metal Oxide
R8005	VRS-CZ1JF512FY	AA		J	5.1k 1/16W Metal Oxide
R8006	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R8007	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R8008	VRS-CZ1JF561JY	AA		J	560 1/16W Metal Oxide
R8009	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R8010	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R8011	VRS-CZ1JF105JY	AA		J	1M 1/16W Metal Oxide
R8012	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R8013	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R8016	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R8018	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R8020	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R8024	VRS-CZ1JF560JY	AA		J	56 1/16W Metal Oxide
R8025	VRS-CZ1JF560JY	AA		J	56 1/16W Metal Oxide
R8026	VRS-CZ1JF560JY	AA		J	56 1/16W Metal Oxide
R8027	VRS-CZ1JF560JY	AA		J	56 1/16W Metal Oxide
R8028	VRS-CZ1JF560JY	AA		J	56 1/16W Metal Oxide
R8029	VRS-CZ1JF560JY	AA		J	56 1/16W Metal Oxide
R8031	VRS-CZ1JF303JY	AA		J	30k 1/16W Metal Oxide
R8032	VRS-CZ1JF303JY	AA		J	30k 1/16W Metal Oxide
R8033	VRS-CZ1JF303JY	AA		J	30k 1/16W Metal Oxide
R8034	VRS-CZ1JF303JY	AA		J	30k 1/16W Metal Oxide
R8035	VRS-CZ1JF303JY	AA		J	30k 1/16W Metal Oxide
R8036	VRS-CZ1JF303JY	AA		J	30k 1/16W Metal Oxide
R8037	VRS-CZ1JF303JY	AA		J	30k 1/16W Metal Oxide
R8038	VRS-CZ1JF303JY	AA		J	30k 1/16W Metal Oxide
R8039	VRS-CZ1JF102JY	AA		J	1k 1/16W Metal Oxide
R8046	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R8047	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R8048	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R8049	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R8051	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R8052	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R8054	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R8056	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R8058	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R8060	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R8061	VRS-CZ1JF472FY	AA		J	4.7k 1/16W Metal Oxide
R8062	VRS-CZ1JF472FY	AA		J	4.7k 1/16W Metal Oxide
R8063	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R8065	VRS-CZ1JF330JY	AA		J	33 1/16W Metal Oxide
R8072	VRS-CZ1JF180JY	AA		J	18 1/16W Metal Oxide
R8073	VRS-CZ1JF180JY	AA		J	18 1/16W Metal Oxide
R8074	VRS-CZ1JF180JY	AA		J	18 1/16W Metal Oxide
R8075	VRS-CZ1JF180JY	AA		J	18 1/16W Metal Oxide
R8076	VRS-CZ1JF180JY	AA		J	18 1/16W Metal Oxide
R8077	VRS-CZ1JF180JY	AA		J	18 1/16W Metal Oxide
R8078	VRS-CZ1JF102JY	AA		J	1k 1/16W Metal Oxide
R8079	VRS-CZ1JF750JY	AA		J	75 1/16W Metal Oxide
R8151	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R8152	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R8153	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R8154	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R8157	VRS-CZ1JF101JY	AA		J	100 1/16W Metal Oxide
R8158	VRS-CZ1JF101JY	AA		J	100 1/16W Metal Oxide
R8181	VRS-CG1JF100JY	AA		J	10 1/16W Metal Oxide
R8182	VRS-CG1JF100JY	AA		J	10 1/16W Metal Oxide
R8183	VRS-CG1JF100JY	AA		J	10 1/16W Metal Oxide
R8184	VRS-CG1JF100JY	AA		J	10 1/16W Metal Oxide
R8185	VRS-CG1JF100JY	AA		J	10 1/16W Metal Oxide
R8186	VRS-CG1JF100JY	AA		J	10 1/16W Metal Oxide
R8451	VRS-CZ1JF470JY	AA		J	47 1/16W Metal Oxide
R8453	VRS-CZ1JF472FY	AA		J	4.7k 1/16W Metal Oxide
R8455	VRS-CZ1JF472FY	AA		J	4.7k 1/16W Metal Oxide
R8456	VRS-CZ1JF470JY	AA		J	47 1/16W Metal Oxide
R8457	VRS-CZ1JF470JY	AA		J	47 1/16W Metal Oxide
R8458	VRS-CH1JF000JY	AA		J	0 1/16W Metal Oxide
R8459	VRS-CH1JF000JY	AA		J	0 1/16W Metal Oxide
R8462	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE833FM03 (MAIN Unit)					
R8463	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R8474	VRS-CZ1JF470JY	AA		J	47 1/16W Metal Oxide
R8475	VRS-CZ1JF470JY	AA		J	47 1/16W Metal Oxide
R9001	VRS-TV1JD101JY	AA		J	100 1/16W Metal Oxide
R9002	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R9003	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R9007	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R9008	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R9009	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R9010	VRS-CZ1JF182JY	AA		J	1.8k 1/16W Metal Oxide
R9011	VRS-CZ1JF182JY	AA		J	1.8k 1/16W Metal Oxide
R9013	VRS-CG1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R9018	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R9019	VRS-CZ1JF222JY	AA		J	2.2k 1/16W Metal Oxide
R9020	VRS-TV1JD101JY	AA		J	100 1/16W Metal Oxide
R9021	VRS-TV1JD101JY	AA		J	100 1/16W Metal Oxide
R9023	VRS-CZ1JF000JY	AA		J	0 1/16W Metal Oxide
R9025	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R9026	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R9027	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R9028	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R9301	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
R9302	VRS-CZ1JF332JY	AA		J	3.3k 1/16W Metal Oxide
R9305	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R9308	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R9319	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R9326	VRS-CZ1JF102JY	AA		J	1k 1/16W Metal Oxide
R9601	VRS-CZ1JF103FY	AB		J	10k 1/16W Metal Oxide
R9602	VRS-CG1JF103JY	AB		J	10k 1/16W Metal Oxide
R9603	VRS-CZ1JF272FY	AA		J	2.7k 1/16W Metal Oxide
R9604	VRS-CZ1JF182JY	AA		J	1.8k 1/16W Metal Oxide
R9605	VRS-CZ1JF562JY	AA		J	5.6k 1/16W Metal Oxide
R9606	VRS-CZ1JF390JY	AA		J	39 1/16W Metal Oxide
R9607	VRS-CZ1JF471JY	AA		J	470 1/16W Metal Oxide
R9608	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R9609	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R9610	VRS-CZ1JF682JY	AA		J	6.8k 1/16W Metal Oxide
R9611	VRS-CZ1JF473FY	AA		J	47k 1/16W Metal Oxide
R9612	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R9613	VRS-CZ1JF103FY	AB		J	10k 1/16W Metal Oxide
R9614	VRS-CZ1JF103FY	AB		J	10k 1/16W Metal Oxide
R9615	VRS-CZ1JF4R7JY	AA		J	4.7 1/16W Metal Oxide
R9616	VRS-CZ1JF123FY	AA		J	12k 1/16W Metal Oxide
R9617	VRS-CZ1JF561JY	AA		J	560 1/16W Metal Oxide
R9618	VRS-CZ1JF272FY	AA		J	2.7k 1/16W Metal Oxide
R9619	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R9620	VRS-CZ1JF100JY	AA		J	10 1/16W Metal Oxide
R9621	VRS-CZ1JF4R7JY	AA		J	4.7 1/16W Metal Oxide
R9622	VRS-CZ1JF103FY	AB		J	10k 1/16W Metal Oxide
R9623	VRS-CZ1JF273FY	AA		J	27k 1/16W Metal Oxide
R9624	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R9625	VRS-CZ1JF103FY	AB		J	10k 1/16W Metal Oxide
R9629	VRS-CZ1JF390JY	AA		J	39 1/16W Metal Oxide
R9630	VRS-TW2HF1R0JY	AA		J	1 1/2W Metal Oxide
R9631	VRS-TW2HF1R0JY	AA		J	1 1/2W Metal Oxide
R9633	VRS-CZ1JF390JY	AA		J	39 1/16W Metal Oxide
R9634	VRS-CZ1JF4R7JY	AA		J	4.7 1/16W Metal Oxide
R9701	VRS-CZ1JF563JY	AA		J	56k 1/16W Metal Oxide
R9702	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R9704	VRS-CZ1JF472JY	AA		J	4.7k 1/16W Metal Oxide
R9705	VRS-CZ1JF102JY	AA		J	1k 1/16W Metal Oxide
R9706	VRS-CZ1JF150JY	AA		J	15 1/16W Metal Oxide
R9736	VRS-CZ1JF103JY	AA		J	10k 1/16W Metal Oxide
R9738	VRS-CZ1JF104JY	AA		J	100k 1/16W Metal Oxide
R9739	VRS-CZ1JF333FY	AA		J	33k 1/16W Metal Oxide
R9740	VRS-CZ1JF273JY	AA		J	27k 1/16W Metal Oxide
R9741	VRS-CZ1JF473JY	AA		J	47k 1/16W Metal Oxide
RDA8001	PRDARA724WJFW	AH	N	J	HEAT SINK
RDA8002	PRDARA731WJFW	AH	N	J	HEAT SINK
SC1601	QSOCZA149WJQZY	AF		J	SOCKET
SC1602	QSOCZA171WJZZY	AF		J	SOCKET
SC1801	QSOCZA171WJZZY	AF		J	SOCKET
SC1802	QSOCZA171WJZZY	AF		J	SOCKET
SC1803	QSOCZA171WJZZY	AF		J	SOCKET
SC1804	QSOCNA770WJZZ	AG		J	SOCKET
SC9001	QSOCNA769WJZZ	AG		J	SOCKET
SC9201	QCNCWA715WJQZY	AK		J	CONNECTOR
SC9202	QCNCWA715WJQZY	AK		J	CONNECTOR
SC9302	QCNCWA562WJQZY	AF		J	CONNECTOR
TH2001	VHHM1103J03-1Y	AC		J	THERMISTOR
TU1101	RTUDAA033WJQZ	AY	N	J	TUNER
VA8001	RH-VXA074WJZZY	AB		J	AVRL101A1R1NTB
VA8002	RH-VXA074WJZZY	AB		J	AVRL101A1R1NTB
X2002	RFiLZA023WJQZY	AD		J	FILTER
X8001	RCRSCA039WJZZY	AG		J	CRYSTAL

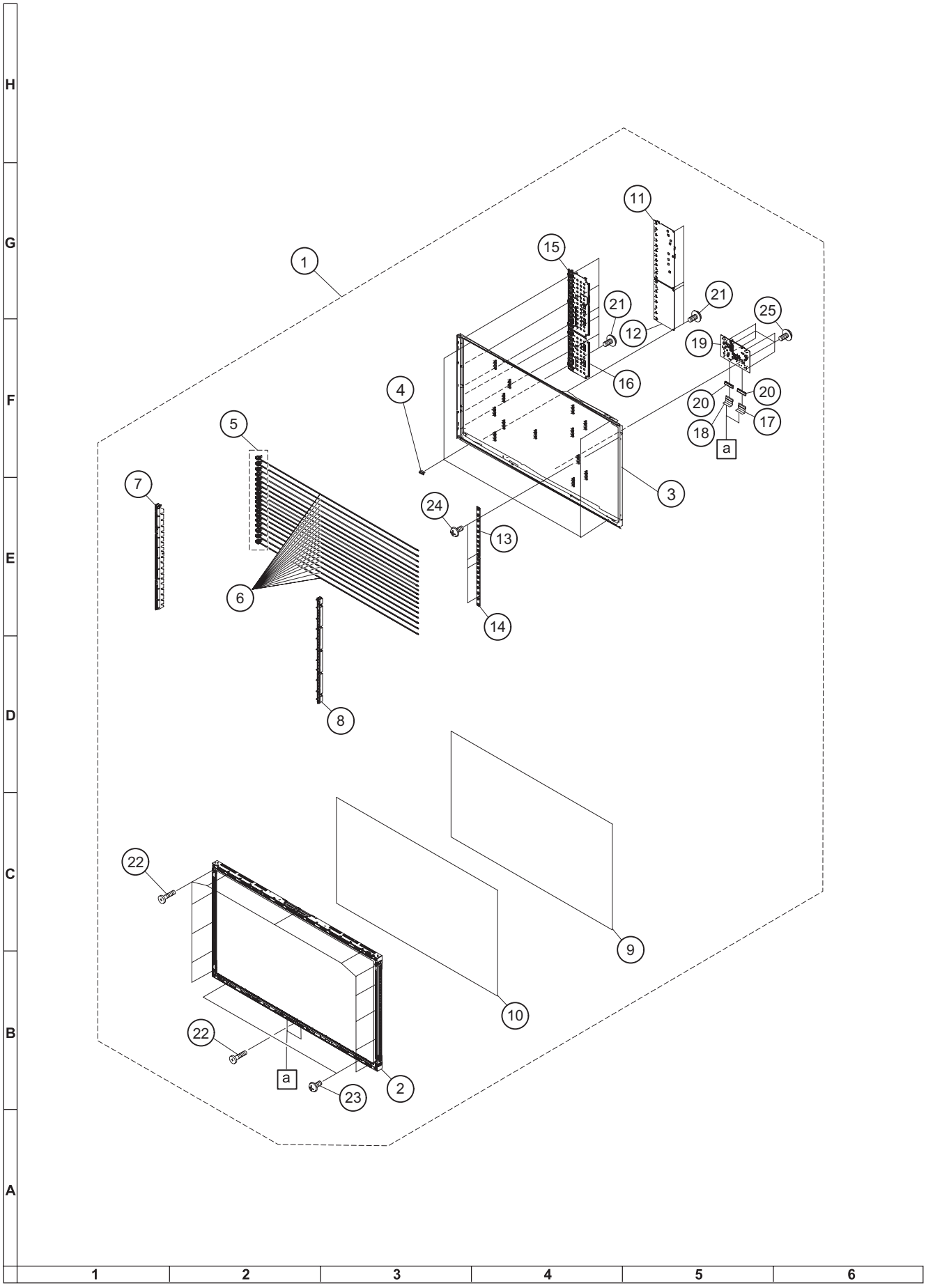
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[4] DUNTKE833FM03 (MAIN Unit)					
N	PCLiCA004WJKZ	AC		J	CLIP
N	PSPAZC152WJKZ	AG		J	SPACER
N	PSPAZC227WJKZ	AC	N	J	SPACER
N	PSPAZC230WJKZ	AC	N	J	SPACER
N	PSPAZC232WJKZ	AK	N	J	SPACER
N	PSPAZC233WJKZ	AK	N	J	SPACER
[5] DUNTKF096FM01 (R/C, LED Unit)					
C101	VCKYCY1HF103ZY	AA		J	0.01 50V Ceramic
C102	VCEASX1CN106MY	AC		J	10 16V Electrolytic
C103	VCEASY1CN107MY	AC		J	100 16V Electrolytic
C104	VCKYTV1CF225ZY	AB		J	2.2 16V Ceramic
D102	RH-PX0421CEZZY	AD		J	CL-165HR/YG-D-T
D103	RH-PX0421CEZZY	AD		J	CL-165HR/YG-D-T
D104	RH-EXA092WJZZY	AB		J	UDZSFVTE-1712B
IC101	VHiGA1S100W-1Y	AE		J	GA1A1S100WP
P102	QPLGNA330WJZZY	AD		J	PLUG
Q102	VS2SC3928AR-1Y	AB		J	2SC3928A-T112-1R
Q103	VS2SC3928AR-1Y	AB		J	2SC3928A-T112-1R
Q104	VS2SC3928AR-1Y	AB		J	2SC3928A-T112-1R
Q105	VS2SC3928AR-1Y	AB		J	2SC3928A-T112-1R
R103	VRS-CY1JF161JY	AA		J	160 1/16W Metal Oxide
R105	VRS-CJ1JF103JY	AA		J	10k 1/16W Metal Oxide
R106	VRS-CY1JF223JY	AA		J	22k 1/16W Metal Oxide
R107	VRS-CY1JF393JY	AA		J	39k 1/16W Metal Oxide
R110	VRS-CY1JF103JY	AA		J	10k 1/16W Metal Oxide
R113	VRS-CY1JF000JY	AA		J	0 1/16W Metal Oxide
R114	VRS-CY1JF161JY	AA		J	160 1/16W Metal Oxide
R115	VRS-CY1JF821JY	AA		J	820 1/16W Metal Oxide
R116	VRS-CY1JF273JY	AA		J	27k 1/16W Metal Oxide
R120	VRS-CY1JF101JY	AA		J	100 1/16W Metal Oxide
RMC101	RRMCUA053WJZZ	AE		J	REMOTE RECEIVER
SLD101	PSLDPA076WJFW	AD		J	SHIELD

[6] CABINET AND MECHANICAL PARTS (LC-46E77U)



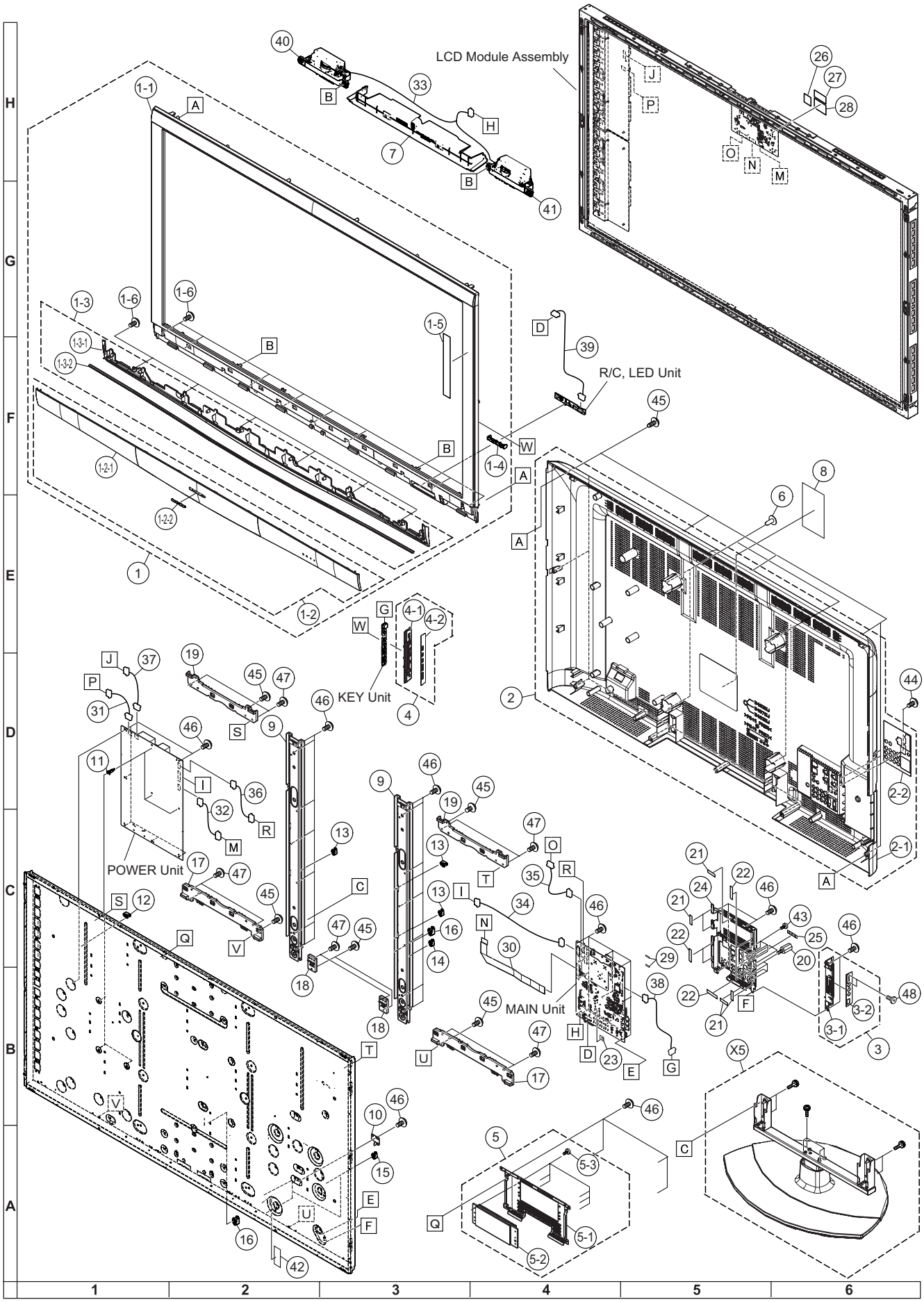
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[6] CABINET AND MECHANICAL PARTS (LC-46E77U)					
1	CCABAC226WJ01	CA	N	X	Front Cabinet Ass'y
1-1	Not Available	−		−	Front Cabinet
1-2	Not Available	−	N	−	Bottom Decoration A Ass'y
1-2-1	Not Available	−	N	−	Bottom Decoration A
1-2-2	HBDGBA061WJSA	AH		J	SHARP Badge
1-3	Not Available	−		−	Bottom Decoration B Ass'y
1-3-1	Not Available	−	N	−	Bottom Decoration B Ass'y
1-3-2	HDECSA057WJ3A	AM	N	X	Shine Trim
1-4	Not Available	−		−	LED Cover
1-5	TLABZC190WJZZ	AG	N	X	Pop Label
1-6	XEBS740P10000	AB		J	Screw, x14
2	CCABBB434WJ01	BN	N	X	Rear Cabinet Ass'y
2-1	Not Available	−	N	−	Rear Cabinet
2-2	HiNDPD214WJSA	AF	N	X	Terminal label
3	CCOVAC951WJ02	AK	N	X	Side AV Cover Ass'y
3-1	Not Available	−	N	−	Side AV Cover
3-2	Not Available	−	N	−	Side AV Label
4	CCOVAC952WJ01	AK		X	Key Button Cover Ass'y
4-1	Not Available	−	N	−	Key Button Cover
4-2	Not Available	−	N	−	Control Button Label
5	CSLDMB612WJ01	AV		X	Control Shield Ass'y
5-1	Not Available	−	N	−	Control Shield
5-2	PRDARA644WJFW	AP		X	Control Radiator
5-3	XBPS730P06WS0	AA		J	Screw(for Radiator), x6
6	GCOVAC576WJKZ	AC		J	Vesa Hole Cover, x4
7	GCOVAD282WJ3A	AN		X	Bottom Cover
8	HiNDPD127WJSA	AD	N	X	Model Label
9	LANGKB834WJFW	AU		X	Support Angle, x2
10	LANGKC082WJFW	AC		X	MAIN PWB Angle
11	LHLDFA036WJKZ	AB		J	Wire Holder(for Power PWB), x3
12	LHLDWA133WJKZ	AC		J	Wire Holder, x2
13	LHLDWA151WJKZ	AB		J	Wire Holder
14	LHLDWA172WJKZ	AD		J	Wire Holder
15	LHLDWA175WJUZ	AC		J	Wire Holder, x2
16	NSFTZA284WJFW	AC		J	Hexagon Nut, x4
17	PMLT-A593WJZZ	AC		X	Gasket:8X35X7T, x5
18	PMLT-A594WJZZ	AD		X	Gasket:8X50X7T, x5
19	PMLT-A597WJQZ	AF		X	Gasket(TUNER)
20	PSLDMB560WJFW	AR		X	MAIN PWB Shield
21	PSPAZB963WJKZ	AD		J	Conductor(JACK), x2
22	PZETJA002WJZZ	AH		X	Barrier Sheet
23	QCNCMA275WJQZ	AC		J	Connecting Cord(MODEL SELECTOR), x2
24	QCNW-H776WJQZ	AX		X	Connecting Cord(LW:MAIN-LCD)
25	QCNW-H812WJQZ	AF		X	Connecting Cord(LA:POW-INV)
26	QCNW-H813WJQZ	AF		X	Connecting Cord(PL:POW-LCD)
27	QCNW-H495WJPZ	AL		X	Connecting Cord(SP:MAIN-SP(L/R))
28	QCNW-J129WJQZ	AL		X	Connecting Cord(PD:MAIN-POW)
29	QCNW-J130WJQZ	AH		X	Connecting Cord(LP:MAIN-LCD)
30	QCNW-J131WJQZ	AH		X	Connecting Cord(LB1:MAIN-POW)
31	QCNW-J132WJQZ	AF		X	Connecting Cord(LB2:POW-INV)
32	QCNW-J133WJQZ	AF		X	Connecting Cord(KM:MAIN-KEY)
33	QCNW-J134WJQZ	AH		X	Connecting Cord(RA:MAIN-LED)
34	RSP-ZA413WJZZ	AQ		J	Speaker(L)
35	RSP-ZA414WJZZ	AQ		J	Speaker(R)
36	Not Available	−		−	Bar Code Label
37	XBPS830P06000	AA		J	HDMI Screw, x4
38	XEBS740P08000	AB		J	Screw(FOR CAB-A), x8
39	XEBS930P10000	AA		J	Screw(S-VIDEO)
40	XEBS940P16000	AB		J	Screw(CAB-A/B), x8
41	XHPS830P06WS0	AA		J	Screw, x41
42	XHPS830P10WS0	AB		J	Screw(FOR CAB B), x4
43	XiPSN20P04000	AA		J	Screw(SIDE HDMI), x2

[7] LCD MODULE Assembly (LC-46E77U)



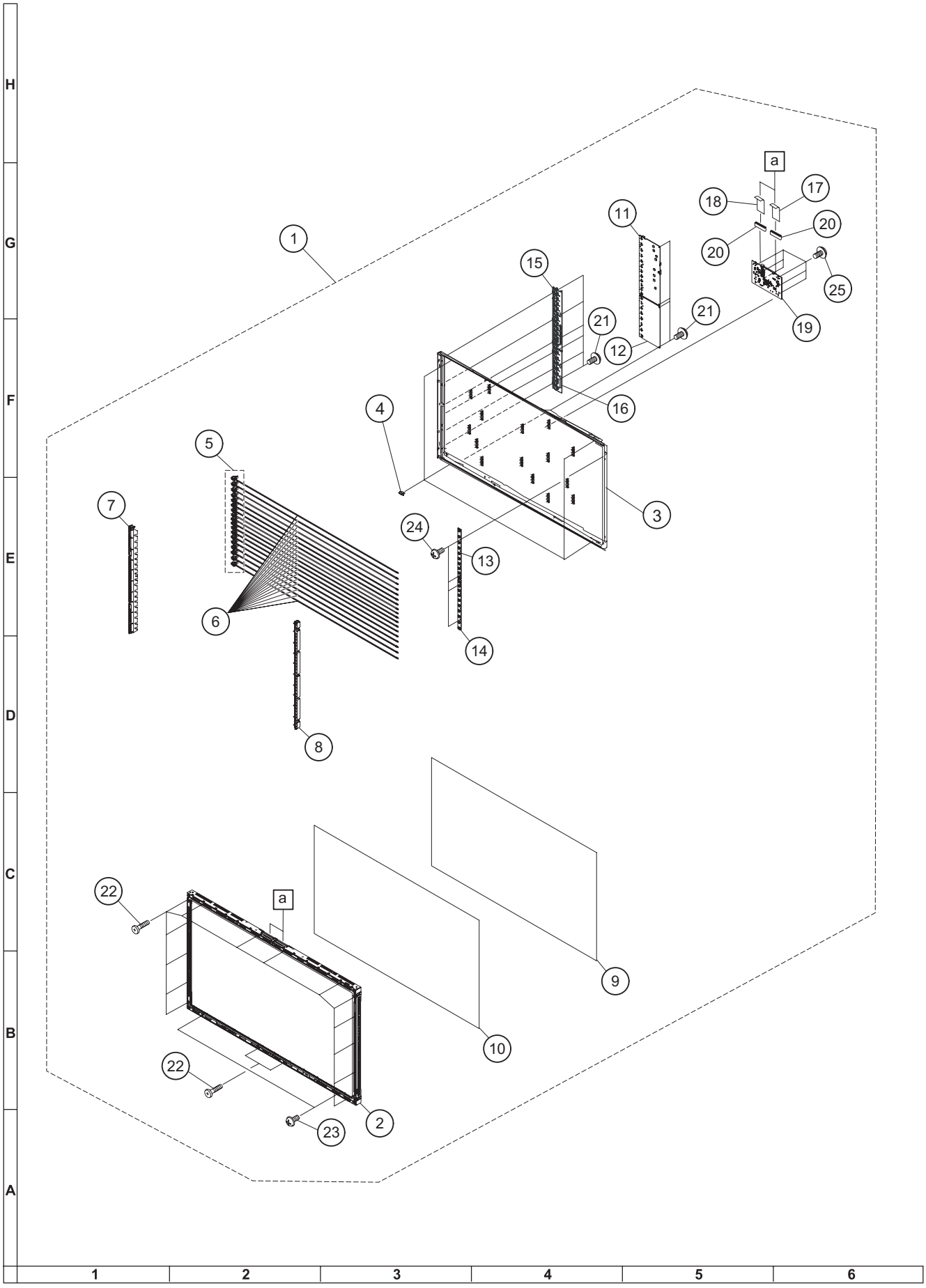
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[7] LCD MODULE Assembly (LC-46E77U)					
1	R1LK460D3LW80Z	EL	N	X	46"LCD Panel Module(LK460D3LW80Z2)
2	Not Available	–		–	Bezel Ass'y
3	Not Available	–		–	BL Chassis Ass'y
4	LHLDZA963WJKZ	AB		J	Holder, x4
5	QSOCFA002WJZZ	AD		J	Socket, x18
6	RLMPLA038WJN1	AR		J	Lamp, x18
7	CHLDZB349WJ01	AU		J	Lamp Holder Unit
8	CHLDZB350WJ01	AU		J	Lamp Holder Unit
9	PCOVUA113WJZZ	BA		J	Diffusion Plate
10	PSHEPA873WJZZ	AX		J	Lens Sheet
11	RUNTKA538WJN1	BF		J	Inverter Unit
12	RUNTKA539WJN1	BF		J	Inverter Unit
13	RUNTKA540WJZZ	AP		J	GND-PWB
14	RUNTKA541WJZZ	AP		J	GND-PWB
15	PCOVWA038WJKZ	AM		J	Cover
16	PCOVWA039WJKZ	AM		J	Cover
17	QPWBM0782TPZZ	AG		J	FPC
18	QPWBM0783TPZZ	AG		J	FPC
19	CPWBX4023TPXA	BW		J	C-PWB (LCD Control Unit)
20	RCORFA061WJZZ	AG		J	Ferrite Core, x2
21	XHPS830P06WS0	AA		J	Screw, x10 (for Inverter Unit x4, for Cover x6)
22	LX-HZA039WJF7	AB		J	Screw, x14 (for fixing Bezel Ass'y)
23	LX-HZA047WJF7	AB		J	Screw, x2 (for fixing Bezel Ass'y)
24	LX-HZA046WJF7	AB		J	Screw, x4 (for GND-PWB)
25	LX-HZA045WJF7	AB		J	Screw, x6 (for C-PWB)

[8] CABINET AND MECHANICAL PARTS (LC-52E77U)



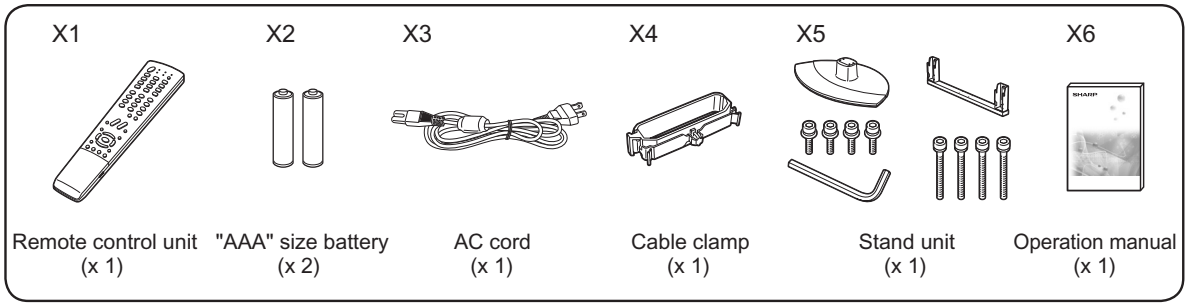
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[8] CABINET AND MECHANICAL PARTS (LC-52E77U)					
1	CCABAC225WJ01	BX	N	X	Front Cabinet Ass'y
1-1	Not Available	−		−	Front Cabinet
1-2	Not Available	−	N	−	Bottom Decoration A Ass'y
1-2-1	Not Available	−	N	−	Bottom Decoration A
1-2-2	HBDGBA061WJSA	AH		J	SHARP Badge
1-3	Not Available	−		−	Bottom Decoration B Ass'y
1-3-1	Not Available	−	N	−	Bottom Decoration B Ass'y
1-3-2	HDECSA058WJ3A	AM	N	X	Shine Trim
1-4	Not Available	−		−	LED Cover
1-5	TLABZC190WJZZ	AG	N	X	Pop Label
1-6	XEBS740P10000	AB		J	Screw, x14
2	CCABBB432WJ01	BQ	N	X	Rear Cabinet Ass'y
2-1	Not Available	−	N	−	Rear Cabinet
2-2	HiNDPD214WJSA	AF	N	X	Terminal label
3	CCOVAC951WJ02	AK	N	X	Side AV Cover Ass'y
3-1	Not Available	−	N	−	Side AV Cover
3-2	Not Available	−	N	−	Side AV Label
4	CCOVAC952WJ01	AK		X	Key Button Cover Ass'y
4-1	Not Available	−	N	−	Key Button Cover
4-2	Not Available	−	N	−	Control Button Label
5	CSLDMB612WJ01	AV		X	Control Shield Ass'y
5-1	Not Available	−	N	−	Control Shield
5-2	PRDARA644WJFW	AP		X	Control Radiator
5-3	XBPS730P06WS0	AA		J	Screw(for Radiator), x6
6	GCOVAC576WJKZ	AC		J	Vesa Hole Cover, x4
7	GCOVAD282WJ3A	AN		X	Bottom Cover
8	HiNDPD125WJSA	AD	N	X	Model Label
9	LANGKB678WJN3	AV		X	Support Angle, x2
10	LANGKC082WJFW	AC		X	MAIN PWB Angle
11	LHLDFA036WJKZ	AB		J	Wire Holder(for Power PWB), x3
12	LHLDWA133WJKZ	AC		J	Wire Holder
13	LHLDWA151WJKZ	AB		J	Wire Holder, x3
14	LHLDWA172WJKZ	AD		J	Wire Holder
15	LHLDWA175WJUZ	AC		J	Wire Holder, x3
16	LHLDWA176WJUZ	AC		J	Wire Holder(for LW), x2
17	LHLDZB144WJKZ	AH		X	Corner Lug, x2
18	LHLDZB145WJKZ	AD		X	Center Lug, x2
19	LHLDZB388WJ3Z	AX		X	Corner Lug(UP), x2
20	NSFTZA284WJFW	AC		J	Hexagon Nut, x4
21	PMLT-A593WJZZ	AC		X	Gasket:8X35X7T, x5
22	PMLT-A594WJZZ	AD		X	Gasket:8X50X7T, x5
23	PMLT-A597WJQZ	AF		X	Gasket(TUNER)
24	PSLDMB560WJFW	AR		X	MAIN PWB Shield
25	PSPAZB963WJKZ	AD		J	Conductor(JACK), x3
26	PSPAZC234WJKZ	AG		X	Spacer D:23X23X3.5T
27	PSPAZC235WJKZ	AL		X	Spacer A:35X15X4.5T
28	PSPAZC236WJKZ	AL		X	Spacer B:35X23X3.5T
29	QCNCMA275WJQZ	AC		J	Connecting Cord(MODEL SELECTOR), x2
30	QCNW-J147WJQZ	AZ		X	Connecting Cord(LW:MAIN-LCD)
31	QCNW-G163WJQZ	AF		X	Connecting Cord(LA:POW-INV)
32	QCNW-G170WJQZ	AE		X	Connecting Cord(PL:POW-LCD)
33	QCNW-H495WJPZ	AL		X	Connecting Cord(SP:MAIN-SP(L/R))
34	QCNW-J139WJQZ	AM		X	Connecting Cord(PD:MAIN-POW)
35	QCNW-J140WJQZ	AK		X	Connecting Cord(LP:MAIN-LCD)
36	QCNW-J141WJQZ	AH		X	Connecting Cord(LB1:MAIN-POW)
37	QCNW-J142WJQZ	AF		X	Connecting Cord(LB2:POW-INV)
38	QCNW-H493WJQZ	AE		X	Connecting Cord(KM:MAIN-KEY)
39	QCNW-J144WJQZ	AK		X	Connecting Cord(RA:MAIN-LED)
40	RSP-ZA413WJZZ	AQ		J	Speaker(L)
41	RSP-ZA414WJZZ	AQ		J	Speaker(R)
42	Not Available	−		−	Bar Code Label
43	XBPS830P06000	AA		J	HDMI Screw, x4
44	XEBS930P10000	AA		J	Screw(S-VIDEO)
45	XEBS940P16000	AB		J	Screw, x18(CAB-A/B)
46	XHPS830P06WS0	AA		J	Screw, x39
47	XHPS840P08WS0	AB		J	Screw, x10(FOR LUG)
48	XiPSN20P04000	AA		J	Screw, x2(SIDE HDMI)

[9] LCD MODULE Assembly (LC-52E77U)



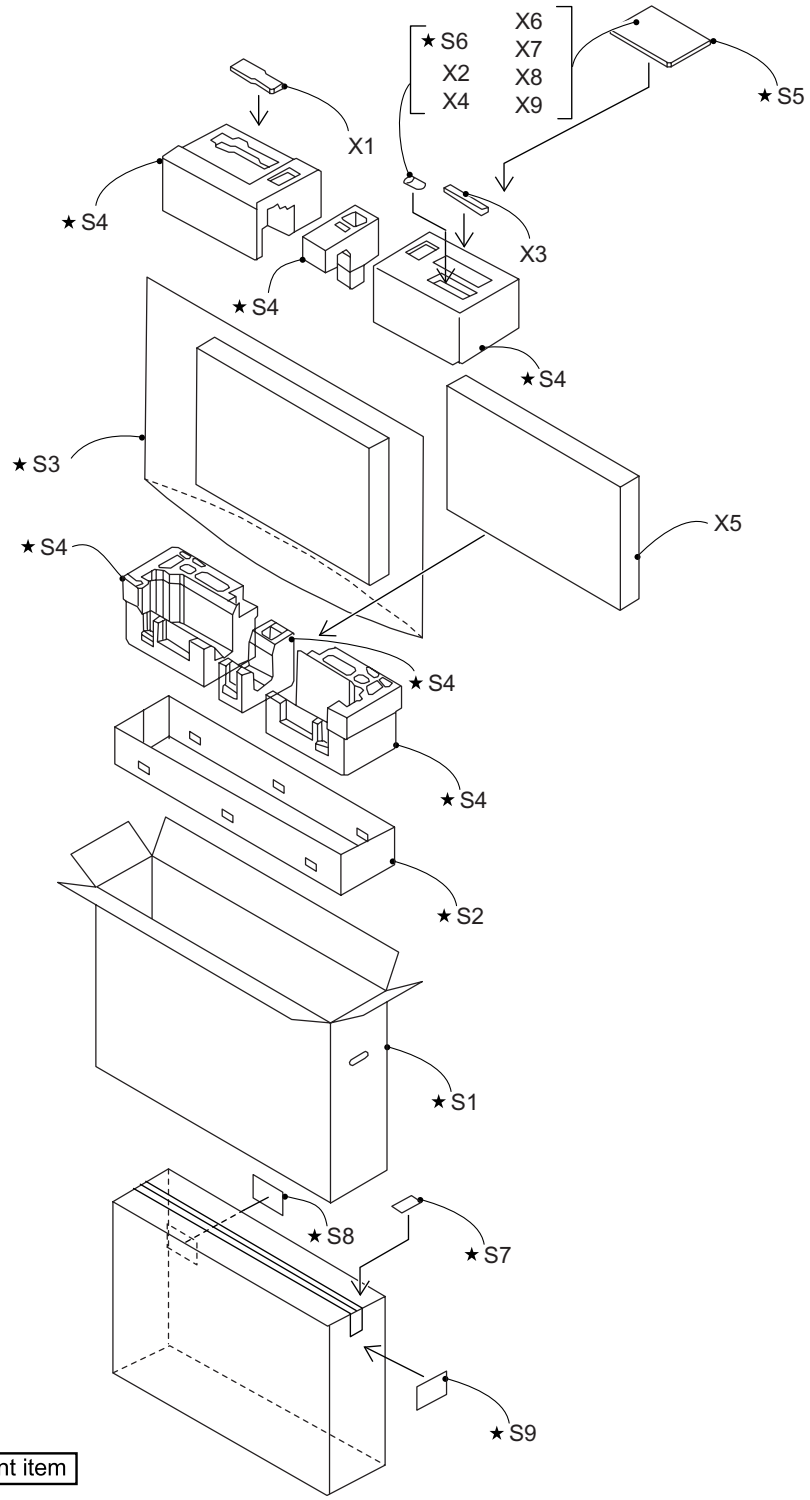
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[9] LCD MODULE Assembly (LC-52E77U)					
1	R1LK520D3LW80Z	EY	N	X	52"LCD Panel Module(LK520D3LW80Z2)
2	Not Available	–		–	Bezel Ass'y
3	Not Available	–		–	BL Chassis Ass'y
4	LHLDZA963WJKZ	AB		J	Holder, x4
5	QSOCFA003WJZZ	AD		J	Socket, x18
6	RLMPLA033WJN1	AR		J	Lamp, x18
7	CHLDZB353WJ01	AV		J	Lamp Holder Unit
8	CHLDZB354WJ01	AV		J	Lamp Holder Unit
9	PCOVUA158WJZZ	BD		J	Diffusion Plate
10	PSHEPA874WJZZ	BB		J	Lens Sheet
11	RUNTKA528WJN1	BF		J	Inverter Unit
12	RUNTKA529WJN1	BF		J	Inverter Unit
13	RUNTKA530WJZZ	AP		J	GND-PWB
14	RUNTKA531WJZZ	AP		J	GND-PWB
15	PCOVWA040WJKZ	AK		J	Cover
16	PCOVWA041WJKZ	AH		J	Cover
17	QPWBM0566TPZZ	AG		J	CS-FPC
18	QPWBM0574TPZZ	AG		J	CS-FPC
19	CPWBX4023TPXZ	BW		J	C-PWB (LCD Control Unit)
20	RCORFA061WJZZ	AG		J	Ferrite Core, x2
21	XHPS830P06WS0	AA		J	Screw, x10 (for Inverter Unit x4, for Cover x6)
22	LX-HZA039WJF7	AB		J	Screw, x16 (for BL Chassis Ass'y)
23	LX-HZA047WJF7	AB		J	Screw, x2 (for BL Chassis Ass'y)
24	LX-HZA046WJF7	AB		J	Screw, x4 (for GND-PWB)
25	LX-HZA045WJF7	AB		J	Screw, x6 (for C-PWB)

[10] SUPPLIED ACCESSORIES



NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[10] SUPPLIED ACCESSORIES					
X1	RRMCGA759WJSA	AX	N	X	Remote Control Unit
X2	Not Available	–		–	Battery
⚠ X3	QACCDA066WJPZ	AP		X	AC Cord
X4	LHLDWA173WJKZ	AE		J	Cable Clamp
X5	CDAi-A552WJ02	BQ	N	X	Stand Unit (LC-46E77U)
X5	CDAi-A546WJ02	BQ	N	X	Stand Unit (LC-52E77U)
X6	TiNS-E113WJZZ	AN	N	X	Operation Manual
X7	TCADEA243WJZZ	AD		X	Enquete Card
X8	TCAUZA342WJN1	AC		X	Transition Note
X9	TGAN-A845WJN1	AD		X	Extendedwaranty

[11] PACKING PARTS (NOT REPLACEMENT ITEM



★ Not Replacement item

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[11] PACKING PARTS (NOT REPLACEMENT ITEM					
S1	SPAKCE933WJZZ	–	N	–	Packing Case (LC-46E77U)
S1	SPAKCE934WJZZ	–	N	–	Packing Case (LC-52E77U)
S2	SPAKCE684WJZZ	–		–	Packing Case Bottom (LC-46E77U)
S2	SPAKCE686WJZZ	–		–	Packing Case Bottom (LC-52E77U)
S3	SPAKPA992WJZZ	–		–	Sack-TV (LC-46E77U)
S3	SPAKPA999WJZZ	–		–	Sack-TV (LC-52E77U)
S4	SPAKXC318WJZZ	–		–	Packing Form (LC-46E77U)
S4	SPAKXC319WJZZ	–		–	Packing Form (LC-52E77U)
S5	SSAKA0101GJZZ	–		–	Sack
S6	SSAKAA032WJZZ	–		–	Sack
S7	TLABKA009WJZZ	–		–	Case No. Label
S8	TLABNB037WJZZ	–		–	Back Serial Label
S9	TLABNC391WJZZ	–	N	–	Side Serial Label

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART DELIVERY	DESCRIPTION
[12] SERVICE JIG (USE FOR SERVICING)					
N	QCNW-C222WJQZ	AW		J	Connecting Cord (100cm 80pin)
N					LCD Control-LCD Panel, x2
N	QCNW-F676WJQZ	BH		J	Connecting Cord (100cm 41pin)
N					Main-LCD Control (LW)
N	QCNW-G401WJQZ	AP		J	Connecting Cord (100cm 4-5pin)
N					Main-KEY (KM)
N	QCNW-G405WJQZ	AP		J	Connecting Cord (100cm 4pin)
N					Main-LCD Control (PL)
N	QCNW-J349WJQZ	AS	N	J	Connecting Cord (150cm 13pin)
N					Main-LCD Control (LP)
N	QCNW-H184WJQZ	AX		J	Connecting Cord (100cm 12pin)
N					Main-Power (PD)
N	QCNW-H649WJPZ	AP		J	Connecting Cord (100cm 4pin)
N					Main-Speaker (SP)
N	QCNW-H762WJQZ	AV		J	Connecting Code (100cm 10pin)
N					Main-LED (RA)
N	QCNW-J330WJQZ	AS	N	J	Connecting Cord (100cm 6pin)
N					Main-Power (LB1)
N	QCNW-J331WJQZ	AP	N	J	Connecting Cord (100cm 6-9pin)
N					Main-Inverter (LB2)

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Mar. 2009 TQ2726-S
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SHARP CORPORATION
AV Systems Group
CS Promotion Center
Yaita, Tochigi, 329-2193, Japan